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VOLUME 10 PART 3

NORTH AMERICAN FLORA

(AGARICALES)

AGARICACEAE (pars)

AGARICEAE (pars)

WILLIAM ALPHONSO MURRILL

PUBLISHED BY

THE NEW YORK BOTANICAL GARDEN

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ANNOUNCEMENT

NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

The work will be published in parts at irregular intervals, by the New York Botanical Garden, through the aid of the income of the David Lydig Fund bequeathed by Charles P. Daly.

It is planned to issue parts as rapidly as they can be prepared, the extent of the work making it possible to commence publication at any number of points. The completed work will form a series of volumes with the following sequence:

Volume 1. Myxomycetes, Schizophyta, Diatomaceae.

Volumes 2 to 10. Fungi.

Volumes 11 to 13. Algae.

Volumes 14 and 15. Bryophyta.

Volume 16. Pteridophyta and Gymnospermae.

Volumes 17 to 19. Monocotyledones.

Volumes 20 to 34. Dicotyledones.

The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. W. A. Murrill, and Dr. J. H. Barnhart.

Professor George F. Atkinson, of Cornell University; Professor John M. Coulter, of the University of Chicago; Mr. Frederick V. Coville, of the United States Department of Agriculture; Professor Byron D. Halsted, of Rutgers College; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

Each author will be wholly responsible for his own contributions, being restricted only by the general style adopted for the work, which must vary somewhat in the treatment of diverse groups.

The subscription price is fixed at $1.50 for each part; it is expected that four or five parts will be required for each volume. A limited number of separate parts will be sold at $2.00 each. Address:

THE NEW YORK BOTANICAL GARDEN
BRONX PARK
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5 × 3 μ; stipe curved, slightly tapering upward, glabrous, whitish, hollow, with a tough rind, 5 cm. long, 3–5 mm. thick; volva rather delicate, narrow, avellaneous, 1–2 cm. long.

TYPE LOCALITY: Moore Town, Jamaica.
HABITAT: On the decaying roots of an upturned tree in a virgin forest.
DISTRIBUTION: Known only from the type locality.

20. **Volvariopsis cubensis** Murrill, Mycologia 3: 281. 1911.

Volvaria cubensis Murrill, Mycologia 4: 332. 1912.

Pileus firm, fleshy, rather tough, irregularly expanded, obtuse, solitary, 7 cm. broad; surface dark-smoky-brown, minutely fibrillose, not striate, the disk seal-brown and glabrous; context with strong, unpleasant odor; lamellae free, distant, subcrowded, rather broad, subventricose, heterophyllous; spores ellipsoid, smooth, uninucleate, about 5.5 × 3.5 μ; stipe subcylindric, slightly enlarged above and below, concolorous but paler, glabrous, solid, tough, the apex pallid, 6–7 cm. long, 7 mm. thick; volva thick and fleshy, cup-shaped, distant, bifid, concolorous.

TYPE LOCALITY: Santiago de las Vegas, Cuba.
HABITAT: On the ground in a banana field.
DISTRIBUTION: Santiago de las Vegas, Cuba.

21. **Volvariopsis Bakeri** Murrill, Mycologia 3: 281. 1911.

Volvaria Bakeri Murrill, Mycologia 4: 332. 1912.

Pileus fleshy, ovoid to convex, densely gregarious, reaching a breadth of 10 cm.; surface dark-fuliginous, becoming much lighter with age, appressed-fibrillose from the cracking of the cuticle, not striate; context white, with mild taste and no appreciable odor; lamellae free, crowded, not very broad, white, becoming pink; spores broadly ellipsoid, rarely ovoid, smooth, roseous, 6–8 × 4–5 μ; stipe tapering upward, white, glabrous, solid, 8–9 cm. long, 1–1.5 cm. thick; volva free, open, dark-fuliginous, 3–4 cm. long, 2–3 cm. broad.

TYPE LOCALITY: Santiago de las Vegas, Cuba.
HABITAT: On a dead banana stump.
DISTRIBUTION: Known only from the type locality.

Subtribe 3. PHOLIOTANAE*

Lamellae readily separable from the context.
  Stipe lateral or none. — 62. TAPINIA.
  Stipe central or eccentric. — 63. PAXILLUS.
Lamellae not readily separable from the context.
  Volva and annulus absent; a slight, non-arachnoid, evanescent veil present at times in young stages.
    Pileus irregular, dimidiate or resupinate. — 64. CREPIDOTUS.
    Pileus circular and centrally stipitate.
      Stipe cartilaginous.
        Lamellae not dissolving at maturity.
          Lamellae decurrent. — 65. TUBARIA.
          Lamellae adnate or adnexed.
            Margin of pileus straight and appressed when young. — 66. GALERULA.
            Margin of pileus incurved when young. — 67. NAUCORIA.
          Lamellae free, rarely adnexed. — 68. PLUTEOLUS.
        Lamellae dissolving at maturity, free or attached. — 69. MYCENA.
      Stipe fleshy, somewhat woody in certain species of *Gymnopilus*.
        Lamellae long-decurrent, anastomosing behind; terrestrial species. — 70. PHYLLOPORUS.
        Lamellae usually adnate or short-decurrent, not anastomosing; mostly wood-loving species, with spores ferruginous in mass. — 71. GYMNOPILUS.
        Lamellae sinuate or adnexed, not anastomosing; terrestrial species with spores usually isabelline.
          Pileus glabrous and viscid. — 72. HEBELOMA.
          Pileus silky or squamulose, slightly viscid in two or three species. — 73. INOCYBE.
  Volva or annulus present. [See next part for the remainder of this key, containing *Pholiota*, *Cortinarius*, and *Locellina*.]

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* See N. Am. Flora 9: 237, for a key to the four subtribes of the Agariceae. The Pholiotanae are distinguished by their spores, which are ochraceous, ferruginous, or fulvous.

62. TAPINIA (Fries) P. Karst. Bidr. Finl. Nat. Folk 32: 452. 1879.

Paxillus § *Tapinia* Fries, Epicr. Myc. 317. 1838.
? *Plicaturella* Murrill, N. Am. Flora 9: 172. 1910.

Pileus fleshy, firm, putrescent, dimidiate or resupinate; lamellae radiating from a lateral point, often anastomosing, readily separable from the context; spores ochraceous, ferruginous, or fulvous; stipe none; veil none.

Type species, *Paxillus panuoides* (Fries) Quél.

Lamellae yellow, sinuous. 1. *T. lamellosa.*
Lamellae orange-yellow, corrugate. 2. *T. corrugata.*

1. Tapinia lamellosa (Sow.) Murrill.

? *Agaricus acheruntius* Humb. Fl. Friberg. 73. 1793.
Merulius lamellosus Sow. Engl. Fungi *pl. 403*. 1809.
Agaricus panuoides Fries, Obs. Myc. 2: 227. 1818.
? *Chanterel olivaceus* Schw. Trans. Am. Phil. Soc. II. 4: 296. 1832.
Paxillus panuoides Fries, Epicr. Myc. 318. 1838.
Rhymovis panuoides Rab. Deutschl. Krypt.-Fl. 1: 453. 1844.
Paxillus rudis Berk. & Curt. Ann. Mag. Nat. Hist. III. 4: 296. 1859.
Paxillus ligneus Berk. & Curt. Jour. Linn. Soc. 9: 423. 1867.
Tapinia panuoides P. Karst. Bidr. Finl. Nat. Folk 32: 452. 1879.

Pileus fleshy, thin, sessile or resupinate, sometimes narrowed behind into a short, stipe-like base, dimidiate to flabelliform, imbricate, convex or nearly plane, 2.5–10 cm. broad; surface pubescent or subglabrous, yellowish or brownish-yellow; lamellae anastomosing and crisped behind, crowded, narrow, yellow; spores short-ellipsoid, ochraceous-brown, 4–6 × 3–4 μ.

TYPE LOCALITY: England.
HABITAT: On dead wood, usually of pine.
DISTRIBUTION: Canada to Alabama and west to Washington and California; mountains of Mexico; also in Europe.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 2. *f. 163;* Berk. Outl. Brit. Fungol. *pl. 12, f. 6;* Sow. Engl. Fungi *pl. 403.*
EXSICCATI: Roum. Fungi Gall. *3817;* Sydow, Myc. Mar. *2607.*

2. Tapinia corrugata (Atk.) Murrill.

Paxillus corrugatus Atk. Stud. Am. Fungi 170. 1900.

Pileus sessile, dimidiate, convex to expanded, irregularly cuneate behind, imbricate, 2–5 cm. broad; surface glabrous or very slightly tomentose, smooth, maize-yellow to orange-yellow, tinged with reddish-brown behind, margin entire, subconcolorous, involute; context pale-yellow, spongy, becoming rigid on drying, the odor characteristic and disagreeable, persisting in the dried plant for several months; lamellae of medium distance, 2–3 mm. broad, thin, several times regularly furcate, orange-yellow, conspicuously corrugate, readily separating from the context when fresh, the edges obtuse, very undulate and crenulate; spores broadly ellipsoid or nearly ovoid, smooth, faintly yellow under the microscope, olive-yellow in mass, 3 × 1.5–2 μ.

TYPE LOCALITY: Ithaca, New York.
HABITAT: On decaying wood of hemlock.
DISTRIBUTION: New York.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 158;* ed. 2. *f. 162.*

DOUBTFUL SPECIES

Paxillus Curtisii Berk.; Berk. & Curt. Ann. Mag. Nat. Hist. II. **12** : 423. 1853. Described from specimens collected on pine logs in northern Georgia. This species, which was overlooked by Saccardo, is apparently not distinct from *T. corrugata,* judging from the description.

Paxillus reniformis Berk. & Rav.; Berk. & Curt. Ann. Mag. Nat. Hist. II. **12** : 424. 1853. Described from specimens collected on oak rails at Sulphur Springs, North Carolina. The brief description would suggest *T. lamellosa,* although this species usually occurs on pine rather than oak. The lamellae are said to be at first whitish and at length brownish-ferruginous on account of the spores.

63. PAXILLUS Fries, Gen. Hymen. 8. 1836.

Rhymovis Rab. Deutschl. Krypt.-Fl. 1: 453. 1844.

Pileus fleshy, putrescent, solitary or gregarious, often somewhat irregular; lamellae readily separable from the context, adnate or decurrent; spores sordid or ochraceous; stipe central or somewhat eccentric, fleshy; veil none.

Type species, *Paxillus involutus* (Batsch) Fries.

Stipe subglabrous. 1. *P. involutus.*
Stipe tomentose-hairy. 2. *P. atrotomentosus.*

1. Paxillus involutus (Batsch) Fries, Gen. Hymen. 8. 1836.

? *Agaricus lateralis* Schaeff. Fung. Bavar. 4: Ind. 31. 1774.
Agaricus involutus Batsch, Elench. Fung. Contin. 1: 39. 1786.

Pileus convex to expanded or depressed, 4–8 cm. broad; surface variable in color, grayish, yellowish-brown, or reddish-brown, margin downy and inrolled when young; context yellowish, becoming brownish when bruised; lamellae decurrent, reticulate on the stipe, pallid to greenish-yellow, changing to brown when bruised; spores ovoid, 7–9 × 4–5 μ; stipe central or eccentric, short, equal, concolorous, 3–5 cm. long, 1–2 cm. thick.

TYPE LOCALITY: Germany.
HABITAT: On open ground or on dead logs and stumps in woods.
DISTRIBUTION: Canada to South Carolina and west to Oregon and California; also in Europe.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 155;* ed. 2. *f. 159;* Batsch, Elench. Fung. *f. 61;* Fries, Sv. Aetl. Svamp. *pl. 75;* Gill. Champ. Fr. *pl. 362 (514);* Hard, Mushr. *f. 232;* Murrill, Ed. Pois. Mushr. *f. 7;* Ricken, Blätterp. Deutschl. *pl. 28, f. 4;* Sow. Engl. Fungi *pl. 56.*
EXSICCATI: Herpell, Präp. Hutpilze *90;* Sydow, Myc. Mar. *1506.*

2. Paxillus atrotomentosus (Batsch) Fries, Epicr. Myc. 317. 1838.

Agaricus atrotomentosus Batsch, Elench. Fung. 89. 1783.

Pileus compact, convex, becoming expanded or centrally depressed, solitary or cespitose, 7.5–15 cm. broad; surface varying from subglabrous to scabrous-granulose, sometimes tomentose-hairy on the disk, often minutely rivulose, ochraceous-red, ferruginous-brown, or reddish-brown, margin sometimes paler; context white, occasionally emitting an unpleasant, dirt-like odor; lamellae crowded, rather broad, adnate or slightly decurrent, somewhat branched and anastomosing at the base, pale-creamy-yellow, the interspaces venose; spores ellipsoid, 5–6 × 3–4 μ; stipe firm, stout, solid, eccentric or lateral, rarely central, densely tomentose-hairy, dark-brown, 7.5–15 cm. long, 1.2–3 cm. thick.

TYPE LOCALITY: Europe.
HABITAT: On the ground and on much decayed wood of pine and hemlock.
DISTRIBUTION: Canada to North Carolina and west to Oregon; also in Europe.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 157;* ed. 2. *f. 161;* Batsch, Elench. Fung. *f. 32;* Gill. Champ. Fr. *pl. 360 (512);* Hard, Mushr. *f. 233;* Lucand, Champ. Fr. *pl. 18;* Ricken, Blätterp. Deutschl. *pl. 28, f. 4.*
EXSICCATI: Roum. Fungi Gall. *3402.*

DOUBTFUL AND EXCLUDED SPECIES

Paxillus aurantiacus Ellis, Bull. Torrey Club 9: 18. 1882. Described from specimens collected on moss-covered cedar logs in a swamp. No specimens were found by Earle in the Ellis collection. The spores are described as hyaline.

Paxillus griseotomentosus (Secr.) Fries, Epicr. Myc. 318. 1838. (*Agaricus griseotomentosus* Secr. Myc. Suisse 2: 384. 1833.) Reported from Canada and New England, but probably confused in this country with *P. atrotomentosus.*

Paxillus hirsutus Peck, Bot. Gaz. 4: 169. 1879. Described from specimens collected on stumps at Belleville, Ontario, and also reported from New Jersey. The type specimens are poor, but apparently represent a young stage of *Paxillus atrotomentosus.*

Paxillus porosus Berk.; Lea, Cat. Pl. Cinc. 54. 1849. See *Boletinellus porosus* (Schw.) Murrill, N. Am. Flora 9: 158.

Paxillus pubescens Ellis, Bull. Torrey Club 6: 76. 1876. See *Gomphidius viscidus* (L.) Fries.

Paxillus simulans Peck, Bull. N. Y. State Mus. 1[2]: 30. 1887. Described from specimens collected in thin woods at Sandlake, New York. There are two hymenophores on the type sheet at Albany and they are apparently a whitish species of *Lactaria* or *Russula*. Peck remarks that no latex was observed.

64. CREPIDOTUS (Fries) Quél. Champ. Jura Vosg. 106. 1872.

Agaricus § *Crepidotus* Fries, Syst. Myc. 1: 272. 1821.
Phialocybe P. Karst. Bidr. Finl. Nat. Folk 32: 415. 1879.
Derminus Schroet. Krypt-Fl. Schles. 3[1]: 578. 1889.

Pileus soft, fleshy, putrescent, irregular, often dimidiate or resupinate; lamellae usually radiating from a lateral point; spores ochraceous, ferruginous, or fulvous; stipe lateral or wanting, rarely eccentric; veil none.

Type species, *Crepidotus mollis* (Schaeff.) Quél.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus white, whitish, or grayish-white.
- Pileus 3–10 mm. broad.
  - Spores globose, 5–6 μ. — 1. *C. latifolius.*
  - Spores ellipsoid.
    - Surface glabrous. — 2. *C. albidus.*
    - Surface downy-villose. — 3. *C. herbarum.*
- Pileus 1–2 cm. broad, sometimes smaller in *C. versutus.*
  - Pileus striate on the margin.
    - Spores globose.
      - Lamellae very narrow, crowded. — 4. *C. applanatus.*
      - Lamellae broad, not crowded. — 5. *C. hygrophanus.*
    - Spores ellipsoid. — 6. *C. haerens.*
  - Pileus not striate on the margin; spores ellipsoid.
    - Pileus glabrous or becoming glabrous.
      - Lamellae whitish on the edges. — 7. *C. fraxinicola.*
      - Lamellae concolorous on the edges. — 8. *C. alabamensis.*
    - Pileus villose.
      - Pileus at first resupinate; spores 8.5–10 × 6–7.5 μ. — 9. *C. versutus.*
      - Pileus not at first resupinate; spores 7–8 × 4–6 μ. — 10. *C. Betulae.*
- Pileus 2–8 cm. broad.
  - Surface tomentose. — 11. *C. putrigenus.*
  - Surface glabrous.
    - Spores globose. — 12. *C. malachius.*
    - Spores ellipsoid. — 13. *C. mollis.*

Pileus yellowish, ochraceous, fulvous, or grayish-fulvous.
- Pileus 4–8 mm. broad.
  - Pileus ochraceous, tomentose, 4 mm. broad. — 14. *C. pecten.*
  - Pileus fulvous or grayish-fulvous, usually larger.
    - Surface sulcate-striate, minutely pubescent. — 15. *C. distans.*
    - Surface not striate, minutely squamulose. — 16. *C. sepiarius.*
- Pileus 1–5 cm. broad.
  - Surface glabrous, yellowish. — 17. *C. croceitinctus.*
  - Surface tomentose, yellowish. — 18. *C. nephrodes.*
  - Surface squamulose.
    - Lamellae orange-colored when young. — 19. *C. crocophyllus.*
    - Lamellae white or whitish when young.
      - Spores globose, 4–5 μ. — 20. *C. fulvifibrillosus.*
      - Spores ellipsoid, 8–9 × 5–6 μ. — 21. *C. calolepis.*

Pileus watery-brown and striate when moist, dingy-buff when dry; stipitate. — 22. *C. tiliophilus.*
Pileus ferruginous-orange, squamulose. — 23. *C. flammeus.*
Pileus reddish-yellow. — 24. *C. rubriflavus.*
Pileus red.
- Pileus 2–4 mm. broad, glabrous. — 25. *C. rufolatericius.*
- Pileus 6–15 mm. broad, pulverulent. — 26. *C. cinnabarinus.*

II. SPECIES OCCURRING ON THE PACIFIC COAST

Pileus 4–10 mm. broad.
- Pileus white. — 3. *C. herbarum.*
- Pileus brown. — 27. *C. puberulus.*

Pileus 2–8 cm. broad.
- Pileus white or whitish, glabrous or nearly so.
  - Spores globose. — 12. *C. malachius.*
  - Spores ellipsoid.
    - Surface radially sulcate or plicate. — 28. *C. submollis.*
    - Surface not as above. — 13. *C. mollis.*
- Pileus fulvous, squamulose. — 21. *C. calolepis.*

III. SPECIES CONFINED TO TROPICAL NORTH AMERICA

Pileus 2–10 mm. broad.
  Pileus floccose-pulverulent, pure-white. 29. *C. parvulus.*
  Pileus glabrous.
    Pileus 2–5 mm. broad.
      Surface russet-white or isabelline.
        Stipe inconspicuous, fugacious. 30. *C. Citri.*
        Stipe conspicuous, persistent. 31. *C. eccentricus.*
      Surface chrome-yellow. 32. *C. Dussii.*
    Pileus 5–10 mm. broad.
      Pileus pale-ochraceous. 33. *C. Psychotriae.*
      Pileus testaceous to latericious. 34. *C. bicolor.*
Pileus 1–3 cm. broad, sometimes smaller in *C. cuneiformis* and *C. subcuneiformis.*
Pileus white or whitish.
  Pileus striate on the margin.
    Margin very thin, pellucid, becoming dark on drying. 35. *C. cinchonensis.*
    Margin not as above. 36. *C. sulcatus.*
  Pileus not striate on the margin.
    Pileus about 1 cm. broad. 37. *C. musaecola.*
    Pileus 2–3 cm. broad. 38. *C. fumosifolius.*
Pileus yellowish, isabelline, ochraceous, or melleous.
  Pileus about 1 cm. broad.
    Surface glabrous or nearly so.
      Pileus sessile. 39. *C. subcuneiformis.*
      Pileus attached by a dark-reddish-brown stipe. 40. *C. substipitatus.*
    Surface squamulose. 41. *C. cacaophyllus.*
  Pileus 3 cm. broad, decorated with minute, conic elevations. 42. *C. calolepidoides.*
Pileus ochraceous-red, pulverulent, deeply lacerate. 43. *C. laceratus.*
Pileus rufous, glabrous, not lacerate, although sometimes lobed. 44. *C. pyrrhus.*
Pileus pale-brown or watery-brown.
  Pileus 8–12 mm. broad; lamellae serrulate. 45. *C. cuneiformis.*
  Pileus 1–2.5 cm. broad; lamellae not serrulate. 46. *C. aquosus.*

1. **Crepidotus latifolius** Peck, Bull. Torrey Club 26: 66. 1899.

Pileus very thin, submembranous, sessile, suborbicular, gregarious, 3–6 mm. broad; surface hygrophanous, striatulate when moist, white and slightly pubescent when dry; context white; lamellae very broad, suborbicular, 5 or 6 times as wide as the thickness of the context, subdistant, extending beyond the margin of the pileus, white, becoming pale-ferruginous with age; spores globose, 5–6 μ in diameter.

TYPE LOCALITY: Ohio.
HABITAT: On much decayed wood.
DISTRIBUTION: Known only from the type locality.

2. **Crepidotus albidus** Ellis & Ev. Proc. Acad. Phil. 1894: 322. 1894.

Pileus resupinate-sessile, 5–7.5 mm. broad; surface glabrous, whitish, margin incurved when dry; lamellae radiating from a lateral point, not crowded, thin, broad, pallid to yellowish-brown; spores unequally ellipsoid, yellowish-brown, 5 × 3.5 μ.

TYPE LOCALITY: Ann Arbor, Michigan.
HABITAT: On linden logs.
DISTRIBUTION: Known only from the type locality.

3. **Crepidotus herbarum** (Peck) Sacc. Syll. Fung. 5: 888. 1887.

Agaricus herbarum Peck, Bull. Buffalo Soc. Nat. Sci. 1: 53. 1873.

Pileus thin, resupinate, suborbicular, sometimes becoming reflexed, sessile, dimidiate, 4–10 mm. broad; surface white, clothed with a white, downy villosity, becoming less downy with age, margin incurved when young; lamellae rather narrow, subdistant, radiating from a naked lateral or eccentric point, white, becoming subferruginous; spores ellipsoid, 6–7.5 × 3–4 μ.

TYPE LOCALITY: North Greenbush, New York.
HABITAT: On dead stems of herbs and dead wood of deciduous trees.
DISTRIBUTION: Temperate North America south to New York and west to Washington and California.

4. **Crepidotus applanatus** (Pers.) Gill. Champ. Fr. 557. 1876.

Agaricus applanatus Pers. Obs. Myc. 1: 8. 1796.

Pileus very thin, variable in shape, suborbicular, reniform, cuneiform, or spathulate, plane or convex, sometimes slightly depressed behind, sessile or prolonged behind into a short, compressed, white-tomentose, stipe-like base, gregarious, 1.2–2.5 cm. long, 0.8–2 cm. broad; surface glabrous, hygrophanous, watery-white and striatulate on the margin when moist, white when dry; lamellae very narrow, linear, crowded, decurrent, white, becoming cinnamon; spores globose, 5–6.2 μ.

TYPE LOCALITY: Europe.
HABITAT: On old stumps and much decayed wood.
DISTRIBUTION: Eastern temperate North America; also in Europe.

5. **Crepidotus hygrophanus** Murrill, sp. nov.

Pileus soft, fleshy, narrowly sessile, dimidiate, convex-plane, attached by a white tuft of mycelium, gregarious, 1–2 cm. broad; surface whitish, hygrophanous, becoming nearly fulvous on drying, glabrous, minutely striate over the lamellae, the margin darker, more glabrous and more conspicuously striate in dried specimens; context mild to the taste; lamellae broad, not crowded, thin, entire; spores globose, smooth, pale-yellow under the microscope, usually uniguttulate, 5–6 μ.

Type collected on a rotten beech log at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 236*.
DISTRIBUTION: Known only from the type locality.

6. **Crepidotus haerens** (Peck) Sacc. Syll. Fung. 5: 880. 1887.

Agaricus haerens Peck, Ann. Rep. N. Y. State Mus. 35: 132. 1884.

Pileus thin, convex, sessile, cuneiform or dimidiate, 8–24 mm. broad; surface glabrous or slightly squamulose, hygrophanous, watery-white or gray when moist, white or whitish when dry, margin striatulate when moist; lamellae moderately crowded, narrow, tapering toward each end, subcinereous, becoming brownish; spores ellipsoid, pale-ferruginous, 7.5 × 5 μ.

TYPE LOCALITY: Albany, New York.
HABITAT: On decaying wood.
DISTRIBUTION: New York and Indiana.

7. **Crepidotus fraxinicola** Murrill, sp. nov.

Pileus reniform, convex to subexpanded, not at first resupinate, rather thin, gregarious, 1–2 cm. broad; surface hygrophanous, dirty-white, at first fibrillose, becoming glabrous, except at the strigose-tomentose base; lamellae rather narrow, crowded, several times inserted, white to isabelline, subentire and whitish on the edges; spores ellipsoid, smooth, pale-yellow under the microscope, 7–8 × 3–5 μ.

Type collected on a dead ash trunk, the hymenophores emerging from cracks in the bark, at West Park, New York, July 24, 1903, *F. S. Earle 1507* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

8. **Crepidotus alabamensis** Murrill, sp. nov.

Pileus reniform, convex, not expanding, narrowly attached, gregarious, 1–1.5 cm. broad; surface smooth, glabrous, strigose behind, whitish, much wrinkled on drying, margin entire, concolorous, not striate; context white, rather tough, not readily decaying; lamellae thin, narrow, crowded, pale-isabelline, becoming darker at maturity, entire and concolorous on the edges; spores ellipsoid, pale-yellow under the microscope, smooth, 7–8 × 4 μ.

Type collected on persimmon bark at Palmetto Swamp, near Auburn, Alabama, September 1, 1899, *F. S. Earle* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

9. **Crepidotus versutus** (Peck) Sacc. Syll. Fung. 5: 888. 1887.

Agaricus chimonophilus Peck, Ann. Rep. N. Y. State Mus. 27: 96. 1875. Not *A. chimonophilus* Berk. & Br. 1854.
Agaricus versutus Peck, Ann. Rep. N. Y. State Mus. 30: 70. 1878.

Pileus at first resupinate, becoming reflexed, reniform, or dimidiate, sessile, 0.8–2 cm. broad; surface clothed with a soft, downy or tomentose villosity, white, margin incurved;

lamellae rather broad, subdistant, rounded behind, radiating from a lateral or eccentric point, whitish, becoming ferruginous; spores subellipsoid, 8.5–10 × 6–7.5 μ.

TYPE LOCALITY: Forestburgh, New York.
HABITAT: On decaying wood, bark, etc., in damp, shaded places.
DISTRIBUTION: Temperate North America west to Colorado.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 150;* ed. 2. *f. 154;* Hard, Mushr. *f. 227.*

10. **Crepidotus Betulae** Murrill, sp. nov.

Pileus fleshy, rather thick, suborbicular or reniform, dimidiate, about 2 cm. broad; surface dry, villose with felted hairs, glabrous toward the margin with age, pure-white, margin entire, concolorous; lamellae rounded behind, crowded, broad, plane, pure-white, at length colored by the spores, which are ellipsoid, dark-ochraceous, 7–8 × 4–6 μ.

Type collected on fallen twigs of *Betula lenta* in the New York Botanical Garden, June, 1902, *F. S. Earle 241* (herb. N. Y. Bot. Gard.).
HABITAT: On dead wood of birch and occasionally beech and certain other deciduous trees.
DISTRIBUTION: New York and the mountains of southwestern Virginia.

11. **Crepidotus putrigenus** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 883. 1887.

Agaricus putrigenus Berk. & Curt. Ann. Mag. Nat. Hist. III. **4**: 292. 1859.

Pileus sessile, subreniform, densely imbricate, 2–5 cm. broad; surface dirty-white, tomentose, moist, margin slightly striate; lamellae rather crowded, broad, dirty-white to ferruginous; spores subglobose, 7 μ long.

TYPE LOCALITY: Santee Canal, South Carolina.
HABITAT: On moist, decayed logs.
DISTRIBUTION: New York to Alabama and west to Missouri.
EXSICCATI: Rav. Fungi Am. *410.*

12. **Crepidotus malachius** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 883. 1887.

Agaricus malachius Berk. & Curt. Ann. Mag. Nat. Hist. III. **4**: 291. 1859.

Pileus fleshy, thin on the margin, thicker at the base, reniform, orbicular, cuneate or flabellate, convex or nearly plane, sometimes depressed behind, sessile or with a very short, inconspicuous, white, tomentose stipe, solitary, gregarious, or imbricate, 2.5–6.5 cm. broad; surface glabrous or slightly tomentose at the base, hygrophanous, watery-white or grayish-white and striatulate on the thin margin when moist, white when dry; context white; lamellae thin, crowded, rounded behind, white or whitish, becoming brownish-ferruginous; spores globose, 6–7.5 μ.

TYPE LOCALITY: New England.
HABITAT: Much decayed, prostrate, mossy trunks.
DISTRIBUTION: Maine to Washington and south to Alabama and Ohio.
ILLUSTRATIONS: Bull. N. Y. State Mus. 122: *pl. 112, f. 1–4.*

13. **Crepidotus mollis** (Schaeff.) Quél. Champ. Jura Vosg. 106. 1872.

Agaricus mollis Schaeff. Fung. Bavar. **4**: Ind. 49. 1774.

Pileus fleshy, soft, obovate or reniform, often undulate or lobed, 3–8 cm. broad; surface glabrous, flaccid, pallid, canescent; lamellae decurrent, crowded, linear, 2–5 mm. broad, white to watery-cinnamon; spores brownish-fuscous, 8–9 × 5–6 μ; cystidia filiform, 35 × 4 μ.

TYPE LOCALITY: Bavaria.
HABITAT: On decayed logs of both deciduous and evergreen trees.
DISTRIBUTION: New England to Washington and south to Alabama and California; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 498 (535);* Hussey, Ill. Brit. Myc. 1: *pl. 74;* Lucand, Champ. Fr. *pl. 112;* Pat. Tab. Fung. 1: *pl. 227;* Ricken, Blätterp. Deutschl. *pl. 61, f. 1;* Schaeff. Fung. Bavar. *pl. 213.*
EXSICCATI: Rav. Fungi Car. **3**: *2;* Sydow, Myc. Mar. *3420* (as *C. applanatus*).

14. **Crepidotus pecten** (Berk. & Curt.) Sacc. Syll. Fung. 5: 885. 1887.

Agaricus pecten Berk. & Curt. Ann. Mag. Nat. Hist. III. 4: 292. 1859.

Pileus resupinate to reflexed, flabelliform, 4 mm. broad; surface tomentose, ochraceous, margin crenate-sulcate; context white; lamellae rather broad, umbrinous at maturity, the edges fimbriate; spores subellipsoid, pale-ochraceous, 7–8 μ long.

TYPE LOCALITY: North Carolina.
HABITAT: On dead branches.
DISTRIBUTION: North Carolina.

15. **Crepidotus distans** Peck, Ann. Rep. N. Y. State Mus. 44: 132 (20). 1891.

Pileus membranous, convex, 4–8 mm. broad; surface distantly sulcate-striate, minutely pubescent, tawny; lamellae broad, ventricose, very distant, adnate, concolorous; spores ellipsoid, 10–12.5 × 6–7.5 μ; stipe minute, eccentric, reddish-brown, about 2 mm. long.

TYPE LOCALITY: Carrollton, New York.
HABITAT: On the bark of a thorn tree, *Crataegus tomentosa*.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. 44: *pl. 2, f. 4–7.*

16. **Crepidotus sepiarius** Peck, Bull. Torrey Club 25: 324. 1898.

Pileus thin, convex, subumbilicate, 4–8 mm. broad; surface even, very minutely squamulose, grayish-tawny; lamellae adnexed, minutely crenulate on the edges, tawny; spores broadly ellipsoid, commonly uninucleate, 9–10 × 6 μ; stipe short, curved, generally eccentric, rarely central, brownish, sometimes mealy or pulverulent, 2–4 mm. long.

TYPE LOCALITY: Michigan.
HABITAT: On oak rails.
DISTRIBUTION: Known only from the type locality.

17. **Crepidotus croceitinctus** Peck, Ann. Rep. N. Y. State Mus. 39: 72. 1887.

Pileus convex or nearly plane, sessile, 1–2.5 cm. broad; surface glabrous, sometimes with a white villosity at the base, moist, yellowish; lamellae moderately broad, rounded behind, whitish, becoming dull-saffron-yellow, then ferruginous; spores subglobose or broadly ellipsoid, ferruginous, 5–6 μ long.

TYPE LOCALITY: Adirondack Mountains, New York.
HABITAT: On decaying deciduous wood.
DISTRIBUTION: Known only from the type locality.

18. **Crepidotus nephrodes** (Berk. & Curt.) Sacc. Syll. Fung. 5: 882. 1887.

Agaricus nephrodes Berk. & Curt. Ann. Mag. Nat. Hist. II. 12: 422. 1853.

Pileus thin, plane, suborbicular, reniform or subspatulate, gregarious, sometimes imbricate, 2.5 cm. or more broad; surface dingy, with yellowish-white down, margin inflexed, flesh-white; lamellae gradually attenuate behind, concolorous, ventricose; spores globose, rosy-ferruginous; stipe obsolete or very short.

TYPE LOCALITY: South Carolina.
HABITAT: On dead wood.
DISTRIBUTION: North Carolina and South Carolina.

19. **Crepidotus crocophyllus** (Berk.) Sacc. Syll. Fung. 5: 886. 1887.

Agaricus crocophyllus Berk. Lond. Jour. Bot. 6: 313. 1847.

Pileus sessile, not at first resupinate, subflabelliform, convex, scarcely 12 mm. broad; surface ochraceous-brown, clothed with minute, appressed scales; lamellae rather broad, crowded, rounded behind, orange; spores subglobose, pale-ochraceous-yellow, 6 μ; stipe wanting.

TYPE LOCALITY: Waynesville, Ohio.
HABITAT: On dead logs.
DISTRIBUTION: Ohio.

20. **Crepidotus fulvifibrillosus** Murrill, sp. nov.

Pileus conchate, attached by a rather narrow base, not fully expanding, fragile, gregarious, 1–2 cm. long and 1.5–2.5 cm. broad; surface uniformly dull-white, with tawny, fibrillose scales, strigose behind, margin thin, concolorous, entire to undulate or lobed, often lacerate with age; lamellae rather narrow, crowded, white, soon colored by the spores, entire and concolorous on the edges; spores globose, smooth, pale-yellow under the microscope, 4–5 μ.

Type collected on a dead oak stump in deciduous woods at Falls Church, Virginia, July 2–6, 1904, *W. A. Murrill 104* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

21. **Crepidotus calolepis** (Fries) Quél. Ench. Fung. 108. 1886.

Agaricus calolepis Fries, Oefv. Sv. Vet.-Akad. Förh. **30**[5]: 5. 1873.
Crepidotus fulvotomentosus Peck, Ann. Rep. N. Y. State Mus. **26**: 57. 1874.

Pileus suborbicular, reniform, or dimidiate, sessile or attached by a short, white-villose tubercle or rudimentary stipe, scattered or gregarious, 2.5–5 cm. broad; surface hygrophanous, watery-brown and sometimes striatulate on the margin when moist, whitish, yellowish, or pale-ochraceous when dry, adorned with small, tawny or reddish-brown, hairy or tomentose scales; lamellae broad, subventricose, moderately crowded, rounded behind, radiating from a lateral or eccentric white-villose spot, whitish, becoming brownish-ferruginous; spores ellipsoid, often uniguttulate, 8–9 × 5–6 μ.

TYPE LOCALITY: Europe.
HABITAT: Dead wood of poplar, basswood, and various other trees.
DISTRIBUTION: Throughout temperate North America; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 499 (534)b;* Fries, Ic. Hymen. *pl. 129, f. 4.*

22. **Crepidotus tiliophilus** (Peck) Sacc. Syll. Fung. **5**: 886. 1887.

Agaricus tiliophilus Peck, Ann. Rep. N. Y. State Mus. **35**: 133. 1884.

Pileus moderately thin, convex, 1–2.5 cm. broad; surface minutely pulverulent, hygrophanous, watery-brown and striatulate on the margin when moist, dingy-buff when dry; lamellae rather broad, subdistant, rounded behind, adnexed, concolorous, becoming ferruginous-cinnamon; spores subellipsoid, brownish-ferruginous, 6–7.5 × 4–5 μ; stipe solid, often curved, pruinose, whitish-pubescent at the base, 4–8 mm. long, about 2 mm. thick.

TYPE LOCALITY: East Berne, New York.
HABITAT: On dead trunks and branches of basswood, *Tilia americana.*
DISTRIBUTION: Known only from the type locality.

23. **Crepidotus flammeus** Murrill, sp. nov.

Pileus reniform, convex, rarely slightly depressed behind, sessile or with a short stipe, 1–1.5 cm. broad; surface dry, ferruginous-orange, conspicuously imbricate-squamulose, margin slightly appendiculate, paler, not striate; context yellow, with bitter taste; lamellae adnate, rather broad, subcrowded, pale-yellow to ferruginous, paler and beautifully crenate on the edges; spores broadly ellipsoid, smooth, ferruginous, 7 × 4–5 μ.

Type collected on dead, deciduous wood in mixed woods at Crabbottom, Virginia, July 17–21, 1904, *W. A. Murrill 221* (herb. N. Y. Bot. Gard.).

HABITAT: On fallen branches and dead logs of deciduous trees.
DISTRIBUTION: Connecticut to the mountains of Virginia and Tennessee, and in southern Florida.

24. **Crepidotus rubriflavus** Murrill.

Agaricus dorsalis Peck, Ann. Rep. N. Y. State Mus. **24**: 69. 1872. Not *A. dorsalis* Bosc, 1811.
Crepidotus dorsalis Sacc. Syll. Fung. **5**: 883. 1887.

Pileus sessile, dimidiate or subreniform, plane or slightly depressed behind, 1.5–3 cm. broad; surface slightly fibrillose-tomentose, reddish-yellow, margin substriate, decurved; lamellae crowded, ventricose, rounded behind, radiating from a lateral, white, villose spot, yellowish, becoming brownish-ochraceous or subferruginous; spores globose, 6 μ in diameter.

TYPE LOCALITY: Greig, New York.
HABITAT: On old logs in woods.
DISTRIBUTION: New York to Michigan and Ohio.

25. **Crepidotus rufolatericius** Bres. Hedwigia **24**: 186. 1885.

Pileus membranous, resupinate, rarely reflexed, cupulate, 2–4 mm. broad; surface glabrous, latericio-rufous, margin lobed; lamellae radiating from an eccentric point, distant, broad, ventricose, concolorous, the edges white, rounded at the ends; spores ovoid, flavid, 10–12 × 8 μ.

TYPE LOCALITY: Missouri.
HABITAT: On bark of *Crataegus*.
DISTRIBUTION: Known only from the type locality.
EXSICCATI: Rab.-Wint.-Paz. Fungi Eur. *3941*.

26. **Crepidotus cinnabarinus** Peck, Bull. Torrey Club **22**: 489. 1895.

Pileus thin, sessile, resupinate or reflexed, 6–15 mm. broad; surface minutely tomentose or pulverulent, cinnabar-red; lamellae rather broad, subdistant, minutely reddish-flocculent on the edges, brownish-tawny in dried specimens; spores broadly ellipsoid, 7.5 × 6–7 μ.

TYPE LOCALITY: Michigan.
HABITAT: On decaying wood.
DISTRIBUTION: Michigan, Ohio, and Alabama.

27. **Crepidotus puberulus** Peck, Bull. Torrey Club **25**: 324. 1898.

Pileus thin, reniform or suborbicular, nearly plane, wood-loving, 6–10 mm. broad; surface minutely pubescent, brown; lamellae ventricose, rather broad, rusty-brown when mature, whitish on the edges; spores subellipsoid, usually uninucleate, 9–10 × 5–6 μ; stipe equal, curved, lateral or eccentric, brown, with a patch of white mycelium at the base, 2–4 mm. long.

TYPE LOCALITY: Compton, California.
HABITAT: On decaying wood.
DISTRIBUTION: Known only from the type locality.

28. **Crepidotus submollis** Murrill, Mycologia **4**: 245. 1912.

Pileus sessile, reniform to subcircular, lobed, wood-loving, 2–4 cm. broad; surface white to discolored, finely silky, radially sulcate or plicate, strigose-hirsute behind; lamellae white to ferruginous, rather broad, not distant, edges concolorous; spores ellipsoid, smooth, melleous under a microscope, 9 × 4–5 μ.

TYPE LOCALITY: Seattle, Washington.
HABITAT: On dead wood in woods.
DISTRIBUTION: Washington, Oregon, and California.

29. **Crepidotus parvulus** Murrill, Mycologia **5**: 27. 1913.

Pileus thin, soft, fleshy, resupinate, at first orbicular-reniform, becoming conchiform and convex, gregarious, 1–4 mm. broad; surface pure-white, dry, densely floccose-pulverulent, margin even; lamellae radiating from an eccentric point, rounded behind, distant, thin, broad, white to yellowish-ochraceous; spores globose or subangular, smooth, pale-ochraceous, 4–5 μ; stipe none, point of attachment white, strigose.

TYPE LOCALITY: Hope Gardens, Jamaica.
HABITAT: On dead orange branches.
DISTRIBUTION: Known only from the type locality.

30. **Crepidotus Citri** Pat. Bull. Soc. Myc. Fr. **18**: 172. 1902.

Pileus resupinate to subsessile, thin, soft, orbicular, convex, small, indented-reniform behind, scattered, 2–5 mm. broad; surface russet-white, smooth, neither striate nor incised, glabrous; lamellae radiating from an eccentric point, narrow, ochraceous; spores ovoid, smooth, pale-yellow, 7 × 4 μ; stipe eccentric, inconspicuous, fugacious, white, inserted at the center of a delicate, white, mycelial tuft.

TYPE LOCALITY: Camp Jacob, Guadeloupe.
HABITAT: On dying bark of *Citrus*.
DISTRIBUTION: Guadeloupe and Martinique.

31. **Crepidotus eccentricus** Murrill, sp. nov.

Pileus small, subcircular, convex, not umbonate, closely gregarious, 5 mm. broad; surface smooth, glabrous, isabelline, margin entire, concolorous, incurved; lamellae adnate, broad, ventricose, subcrowded, yellowish to isabelline, entire on the edges; spores broadly ellipsoid to subglobose, smooth, pale-yellowish-brown under the microscope, 5–6 × 4–5 μ; stipe eccentric, very short, enlarged above and below, whitish-mycelioid throughout and arising from a mat of white mycelium, 2 mm. or less long, 0.5 mm. thick.

Type collected on fallen, dead, herbaceous stems in a shaded ravine east of Hope Gardens, Jamaica, December 12, 1908, *W. A. Murrill 21* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

32. **Crepidotus Dussii** Pat. Bull. Soc. Myc. Fr. **18**: 173. 1902.

Pileus convex, orbicular, indented behind, 3–5 mm. broad; surface slightly viscid, glabrous, not striate, chrome-yellow, margin incurved and entire; lamellae inserted, broad, distant, brownish-yellow; spores ovoid, smooth, ochraceous, 8–9 × 6 μ.

TYPE LOCALITY: Baines-Jaunes, Guadeloupe.
HABITAT: On dead wood.
DISTRIBUTION: Guadeloupe and Martinique.

33. **Crepidotus Psychotriae** Pat. Bull. Soc. Myc. Fr. **18**: 173. 1902.

Pileus fleshy, firm, sessile, convex, orbicular, indented or marginate behind, scattered or cespitose, 0.5–1 cm. broad; surface not furrowed, glabrous, smooth, pale-ochraceous, margin entire; lamellae inserted, crowded, broad, brownish, serrate on the edges; spores ovoid, smooth, pale-brown, 8 × 5 μ.

TYPE LOCALITY: Guadeloupe.
HABITAT: On dying branches of *Psychotria glabrata*.
DISTRIBUTION: Guadeloupe and Martinique.

34. **Crepidotus bicolor** Murrill, Mycologia **5**: 28. 1913.

Pileus thin, rather firm, sessile, dimidiate or flabelliform, usually narrowed behind, the base not strigose, convex or applanate above, gregarious, 5–8 mm. broad; surface dry, glabrous or subglabrous, testaceous to latericious, margin undulate, somewhat sulcate with age or on drying; lamellae radiating from the point of attachment, broad, distant, ventricose, ochraceous-ferruginous; spores globose or subglobose, smooth, ochraceous under a microscope, 6–7 μ.

TYPE LOCALITY: British Honduras.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

35. **Crepidotus cinchonensis** Murrill, Mycologia **5**: 30. 1913.

Pileus thin, soft, fleshy, convex to plane above, reniform to orbicular, gregarious, attached by a lateral or eccentric point, or by the vertex, sometimes strigose at the base, appearing esupinate when growing on the under side of a trunk, reaching 2 cm. in diameter; surface dull-watery-white, pulverulent to nearly glabrous, striate, margin very thin, pellucid, darker than the rest of the surface on drying; lamellae radiating from a lateral or eccentric point, crowded, thin, fragile, slightly ventricose, dull-watery-white, becoming subfulvous at maturity; spores ovoid to ellipsoid, smooth, pale-melleous under a microscope, 1–few-guttulate, 8–9 × 4–5 μ.

TYPE LOCALITY: Cinchona, Jamaica.
HABITAT: On dead branches of broad-leaved trees.
DISTRIBUTION: Jamaica.

36. **Crepidotus sulcatus** Murrill, Mycologia **5**: 29. 1913.

Pileus reniform, dimidiate or resupinate, thin, soft, fleshy, gregarious, 1–2 cm. broad; surface white, becoming ochraceous when dry, glabrous, strigose at the base, sulcate-striate on the margin; lamellae radiating from an eccentric or lateral point, crowded or subcrowded,

rather broad, dark-ochraceous or pale-cinnamon; spores broadly ellipsoid, smooth, pale-cinnamon, 7–8 × 6–7 μ; stipe none, pileus attached by a tuft of strigose hairs.

TYPE LOCALITY: Cooper's ranch at the base of El Yunque, near Baracoa, Cuba.
HABITAT: On dead, fallen branches.
DISTRIBUTION: Known only from the type locality.

37. **Crepidotus musaecola** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 883. 1887.

Agaricus musaecola Berk. & Curt. Jour. Linn. Soc. **10**: 291. 1868.

Pileus thin, hemispheric to helmet-shaped, 12 mm. broad; surface white; lamellae adnexed, broad, pallid-fuscous or purple-fuscous; spores obovoid, purplish-brown; stipe at first central, then eccentric and lateral, very short, pulverulent.

TYPE LOCALITY: Cuba.
HABITAT: On dead plantain leaves near the ground.
DISTRIBUTION: Cuba.

38. **Crepidotus fumosifolius** Murrill, Mycologia **5**: 31. 1913.

Pileus sessile, dimidiate or reniform, thin, firm, fleshy, expanded at maturity, scattered, 2–3 cm. broad; surface glabrous or slightly pruinose, whitish or with ochraceous tints, margin even; lamellae crowded, narrow, becoming very dark-fuscous or almost purplish, resembling those of species of *Hypholoma;* spores ellipsoid or ovoid, dark-fuscous, 6–7 × 4 μ.

TYPE LOCALITY: Rose Hill, Jamaica.
HABITAT: On a dead log.
DISTRIBUTION: Known only from the type locality.

39. **Crepidotus subcuneiformis** Murrill, Mycologia **5**: 29. 1913.

Pileus thin, rather firm, fragile on drying, broadly wedge-shaped, approaching orbicular, in outline, plane above, tapering to a rather broad base which is not strigose, gregarious, reaching 1 cm. broad and becoming somewhat longer; surface glabrous or pulverulent, moist, dull-isabelline to avellaneous-isabelline, margin very thin, entire, not striate; lamellae radiating from the sessile base, subcrowded, plane, dull-yellowish to umbrinous; spores ovoid, smooth, melleous under a microscope, uniguttulate, 7–8 × 5 μ.

TYPE LOCALITY: Grenada, West Indies.
HABITAT: On decaying cocoanut husks.
DISTRIBUTION: Known only from the type locality.

40. **Crepidotus substipitatus** Murrill, Mycologia **5**: 31. 1913.

Pileus soft, fleshy, thin, very fragile when dry, orbicular-reniform, expanded, gregarious, about 1 cm. broad; surface moist, subglabrous, dull-ochraceous, not striate on the margin; lamellae adnexed, subcrowded, rather broad, ventricose, ochraceous to dull-cinnamon; spores ovoid or broadly ellipsoid, opaque, dull-cinnamon, minutely punctate, 5–6 × 4 μ; stipe eccentric, short, curved, cylindric, glabrous, shining, dark-reddish-brown, 4–8 mm. long, 1 mm. thick.

TYPE LOCALITY: El Yunque, near Baracoa, Cuba.
HABITAT: On dead twigs on the ground.
DISTRIBUTION: Known only from the type locality.

41. **Crepidotus cacaophyllus** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 883. 1887.

Agaricus cacaophyllus Berk. & Curt. Jour. Linn. Soc. **10**: 291. 1868.

Pileus eccentric, subreniform, 12 mm. broad; surface squamulose, yellowish, margin tomentose; lamellae adnexed, attenuate behind, distant, fuscous; spores ochraceous; stipe short, 5 mm. long, 2 mm. thick.

TYPE LOCALITY: Cuba.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

42. **Crepidotus calolepidoides** Murrill, Mycologia **5**: 30. 1913.

Pileus rather thick, fleshy, strongly convex above, concave below, solitary, narrowly attached behind, 3 cm. broad; surface melleous with an ochraceous tint on the umbo, which is decorated with minute, fulvous, conic elevations; margin striate, dull-brownish in dried specimens, being very distinct in color from the remainder of the surface; attachment of pileus white, finely pubescent or slightly strigose: lamellae broad, not crowded, slightly arcuate, cremeous to fulvous; spores ovoid, smooth, dull-melleous, 8–10 × 5–6 μ.

TYPE LOCALITY: Latimer trail, Cinchona, Jamaica.
HABITAT: On a small dead branch of a deciduous shrub.
DISTRIBUTION: Known only from the type locality.

43. **Crepidotus laceratus** Pat. Bull. Soc. Myc. Fr. **18**: 173. 1902.

Pileus fleshy, flabelliform, attenuate at the base, 1–1.5 cm. broad; surface rugulose, deeply lacerate, ochraceous-red, pulverulent; lamellae inserted, crowded, concolorous, the edges entire; spores ovoid, verrucose, ochraceous, 5–6 × 4–5 μ.

TYPE LOCALITY: Guadeloupe.
HABITAT: On dead wood.
DISTRIBUTION: Guadeloupe.

44. **Crepidotus pyrrhus** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 879. 1887.

Agaricus pyrrhus Berk. & Curt. Jour. Linn. Soc. **10**: 291. 1868.

Pileus sessile, conchiform, 1–3 cm. broad; surface glabrous, rufous; lamellae broad, concolorous; spores ferruginous, echinulate.

TYPE LOCALITY: Cuba.
HABITAT: On decayed wood.
DISTRIBUTION: Cuba, western Jamaica, and Guadeloupe.

45. **Crepidotus cuneiformis** Pat. Bull. Soc. Myc. Fr. **18**: 173. 1902.

Pileus convex to plane, incurved in front, cuneate at the base, fleshy, soft, 8–12 mm. broad; surface glabrous, pale-brown, margin striatulate; lamellae broad, soft, brownish, inserted, slightly serrulate on the edges, radiating from the point of insertion of the pileus; spores globose, smooth, brown, 6 μ.

TYPE LOCALITY: Guadeloupe.
HABITAT: On dead wood.
DISTRIBUTION: Guadeloupe.

46. **Crepidotus aquosus** Murrill, Mycologia **5**: 30. 1913.

Pileus resupinate, thin, delicate, reniform, expanded at maturity, 1–2.5 cm. broad; surface moist, glabrous or subglabrous, watery-brown, deeply sulcate on the margin; context soft and watery; lamellae subcrowded, rather broad, dark-ochraceous or subfulvous; spores globose, smooth, dark-ochraceous, 6–7 μ.

TYPE LOCALITY: Rose Hill, Jamaica.
HABITAT: On a decayed log.
DISTRIBUTION: Known only from the type locality.

DOUBTFUL AND EXCLUDED SPECIES

Crepidotus alveolus (Lasch) P. Karst. Bidr. Finl. Nat. Folk **32**: 413. 1879. (*Agaricus alveolus* Lasch, Linnaea **4**: 547. 1829.) Described from specimens collected on beech trunks in Germany. Reported from Wright's collections in Cuba, which apparently represent *C. musaecola*, and from Duss' collections in Guadeloupe. In referring specimens from St. Vincent, West Indies, to *C. alveolus* in 1892, Massee remarks that they are larger and more crisped and lobed than in the European form, but that there exists no good specific or even varietal distinction between the two forms.

Crepidotus haustellaris (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 415. 1879. (*Agaricus haustellaris* Fries, Obs. Myc. **2**: 232. 1818.) Doubtfully reported by Peck from New York.

I have compared his specimens with good material from Bresadola and they appear to be quite distinct.

Crepidotus hepatizon (Berk.) Sacc. Syll. Fung. **5**: 879. 1887. (*Agaricus hepatizon* Berk. Lond. Jour. Bot. **6**: 486. 1847.) A Ceylon species reported from California by McClatchie.

65. TUBARIA (W. G. Smith) Gill. Champ. Fr. 537. 1876.

Agaricus § *Tubaria* W. G. Smith, Clavis Agar. 21. 1870.

Pileus fleshy, putrescent, the margin incurved when young; lamellae decurrent; spores ochraceous, ferruginous, or fulvous; stipe central, slender, tubular, cartilaginous; veil sometimes present in young stages, but forming no annulus.

Type species, *Tubaria inquilina* (Fries) Gill.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus grayish-white or canescent, 4–6 mm. broad. — 1. *T. canescens.*
Pileus pale-yellow, ochraceous, or reddish-brown fading to ochraceous on drying.
  Pileus 5–10 mm. broad.
    Pileus pale-ochraceous when moist; species occurring in moss. — 2. *T. praecox.*
    Pileus brown when moist; species occurring on fragments of wood in fields. — 3. *T. alabamensis.*
  Pileus 1–2.5 cm. broad.
    Stipe 1–2 cm. long.
      Lamellae adnate-decurrent. — 4. *T. luteoalba.*
      Lamellae strongly decurrent. — 5. *T. decurrens.*
    Stipe 2.5–6 cm. long.
      Pileus conic to campanulate with a slight umbo. — 6. *T. bicona.*
      Pileus umbilicate or depressed.
        Species occurring on dung. — 7. *T. deformata.*
        Species occurring on soil or fallen dead wood.
          Hymenophores gregarious. — 8. *T. crenulata.*
          Hymenophores cespitose. — 9. *T. Earlei.*

II. SPECIES OCCURRING ON THE PACIFIC COAST

Pileus glabrous.
  Pileus cremeous. — 10. *T. Abramsii.*
  Pileus ferruginous or reddish-cinnamon when moist.
    Stipe about 1 cm. long. — 11. *T. brevipes.*
    Stipe 2.5–5 cm. long. — 12. *T. tenuis.*
  Pileus brick-red when moist. — 13. *T. pallescens.*
Pileus furfuraceous. — 8. *T. crenulata.*

III. SPECIES CONFINED TO TROPICAL NORTH AMERICA

Pileus date-brown, pulverulent; stipe 4 mm. thick. — 14. *T. coniophora.*

1. Tubaria canescens Peck, Ann. Rep. N. Y. State Mus. 46: 104 (24). 1893.

Pileus very thin, almost membranous, convex, 4–6 mm. broad; surface grayish-white or canescent, coated with minute, whitish fibrils or appressed tomentum; lamellae distant, decurrent, cinnamon-colored; spores ellipsoid, often containing a shining nucleus, 6 × 4 μ; stipe slender, whitish, fibrillose, with a white mycelium at the base, 12–16 mm long.

TYPE LOCALITY: Selkirk, New York.
HABITAT: On damp, naked soil in woods.
DISTRIBUTION: Known only from the type locality.

2. Tubaria praecox Murrill, sp. nov.

Pileus convex-umbilicate, gregarious, 5–10 mm. broad; surface dry, silky-fibrillose, pale-ochraceous, margin thin, entire, concolorous; lamellae long-decurrent, subcrowded, broad, rosy-ochraceous, entire and concolorous on the edges; spores ovoid to ellipsoid, smooth, pale-yellowish under the microscope, 8 × 4 μ; stipe somewhat enlarged at the apex, fulvous with a rosy tint, glabrous above, subfibrillose below, tough, solid or with a minute cavity, 2 cm. long, 1 mm. thick.

Type collected in moss by the roadside in the New York Botanical Garden, June 15, 1902, *F. S. Earle 276* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

3. **Tubaria alabamensis** Murrill, sp. nov.

Pileus subcampanulate, obtuse, solitary or gregarious, reaching 1 cm. broad; surface clothed with white, silky hairs when young, becoming glabrous, brown when moist, argillaceous when dry, margin even, or subsulcate on drying; lamellae long-decurrent, arcuate, subdistant, pale-cinnamon-colored; spores ellipsoid, pale-yellow under the microscope, $8 \times 5\ \mu$; stipe tapering downward, white-silky-fibrillose, becoming glabrous, stuffed, 2 cm. long, 1 mm. thick.

Type collected on fragments of wood in fields at Auburn, Alabama, February 17, 1901, *F. S. Earle* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

4. **Tubaria luteoalba** Longyear, Bot. Gaz. **28**: 272. 1899.

Pileus thin, convex to plane and centrally depressed, 1–2.5 cm. broad; surface hygrophanous, creamy-white or yellowish, margin often upturned, silky-squamulose from the remains of the veil, striate when moist; lamellae adnate-decurrent, subdistant, 2–4 mm. broad, at first nearly white, soon becoming ochraceous; spores ellipsoid, $6–8 \times 4–5\ \mu$; stipe often curved, whitish, hollow, downy and slightly enlarged at the base, 1.5–2 cm. long, 3–5 mm. thick.

TYPE LOCALITY: Michigan.
HABITAT: On decaying stems and leaves of grasses and weeds in low, wet ground.
DISTRIBUTION: Known only from the type locality.

5. **Tubaria decurrens** (Peck) Murrill.

Flammula decurrens Peck, Bull. Torrey Club 22: 489. 1895.

Pileus thin, umbilicate, centrally depressed or funnelform, about 2.5 cm. broad; surface moist, minutely floccose-squamulose, pale-yellow or cream-colored; lamellae subdistant, strongly decurrent, pale-yellow, becoming ochraceous, the interspaces sometimes veiny; spores ellipsoid, $7.5–8.5 \times 4\ \mu$; stipe equal or tapering downward, minutely downy, stuffed with a cottony pith, concolorous, 12–20 mm. long, 2–4 mm. thick.

TYPE LOCALITY: Kansas.
HABITAT: On wet ground in the shade of bushes.
DISTRIBUTION: Known only from the type locality.

6. **Tubaria bicona** (Pers.) Murrill.

Agaricus biconus Pers. Syn. Fung. 317. 1801.
Agaricus pellucidus Bull. Herb. Fr. *pl. 550, f. 2.* hyponym. 1791; Lam. Fl. Fr. 2: 172. 1815.
Tubaria pellucida Gill. Champ. Fr. 1: 539. 1878.

Pileus conic to campanulate, becoming expanded, with a slight umbo, solitary, 1–2 cm. broad; surface watery, dull-reddish-brown, margin silky from the universal veil; context very thin; lamellae slightly decurrent, arcuate, very broad, fuligino-ferruginous; spores ovoid, pointed, smooth, uniguttulate, pale-yellow under the microscope, about $9 \times 5\ \mu$; stipe slender, tapering above, mealy at the apex, solid, becoming hollow, 3–4 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: By roadsides in grassy places.
DISTRIBUTION: Greenland; also in Europe.
ILLUSTRATIONS: Bull. Herb. Fr. *pl. 550, f. 2;* Ricken, Blätterp. Deutschl. *pl. 59, f. 7* (as *Naucoria pellucida*).

7. **Tubaria deformata** Peck, Ann. Rep. N. Y. State Mus. **51**: 290. 1898.

Pileus thin, convex, becoming plane or centrally depressed, 1.2–2.5 cm. broad; surface glabrous, hygrophanous, reddish-brown when moist, whitish when dry, margin often wavy or irregular; lamellae thin, crowded, broader behind, adnate or decurrent, often wavy, branched or anastomosing, brownish-ferruginous; spores broadly ellipsoid, $7.5 \times 6\ \mu$; stipe firm, hollow, tapering downward, clothed with grayish-white fibrils, 2.5–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: North Elba, New York.
HABITAT: On dung in old roads in woods.
DISTRIBUTION: Known only from the type locality.

8. **Tubaria crenulata** (Batsch) Murrill.

Agaricus crenulatus Batsch, Elench. Fung. 71. 1783.
Agaricus furfuraceus Pers. Syn. Fung. 454. 1801.
Tubaria furfuracea Gill. Champ. Fr. 538. 1876.
Agaricus contrarius Peck, Ann. Rep. N. Y. State Mus. **30**: 41. 1878.
Naucoria contraria Sacc. Syll. Fung. **5**: 842. 1887.
Tubaria Eucalypti Earle, Bull. N. Y. State Mus. **3**: 300. 1904.

Pileus thin, subfleshy, convex to plane or centrally depressed, often umbilicate, gregarious, 1.2–2 cm. broad; surface fulvous, becoming alutaceous when dry, hygrophanous, margin silky-squamose, subfarinaceous, at times striate; lamellae adnate-decurrent, subdistant, plane, cinnamon-colored or ochraceous; spores ovoid, ferruginous, 7–10 × 3–5 μ; cystidia 35–50 × 4.5–6 μ; stipe pallid, reddish, or reddish-brown, hollow, rigid, flocculose, white-mycelioid at the base, 2.5–6 cm. long, 2 mm. thick.

TYPE LOCALITY: Germany.
HABITAT: On the ground among pieces of wood or humus.
DISTRIBUTION: Greenland to North Carolina and west to Washington and California; also in Europe.
ILLUSTRATIONS: Boud. Ic. Myc. **1**: *pl. 129;* Cooke, Brit. Fungi *pl. 603 (527), 483 (528);* Gill. Champ. Fr. *pl. 367 (709);* Pat. Tab. Fung. **1**: *f. 348;* Ricken, Blätterp. Deutschl. *pl. 59, f. 5* (as *Naucoria furfuracea*).
EXSICCATI: C. F. Baker, Pacif. Slope Fungi *157;* Roum. Fungi Gall. *3620.*

9. **Tubaria Earlei** Murrill, sp. nov.

Pileus fleshy, firm, deeply umbilicate, cespitose, 1–2 cm. broad; surface ochraceous, floccose, not striate, margin entire or slightly lobed, concolorous; lamellae decurrent, crowded, narrow, ochraceous, subentire and concolorous on the edges; spores ellipsoid, apiculate, pale-yellow under the microscope, smooth, 8–10 × 4–6 μ; stipe enlarged above and below, densely floccose, ochraceous, solid, 2.5 cm. long, 2–3 mm. thick.

Type collected on the ground in a wet thicket at Chalmette, New Orleans, Louisiana, September 8, 1908, *F. S. Earle 121* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

10. **Tubaria Abramsii** Murrill, sp. nov.

Pileus convex to plane, not umbonate, gregarious, 1–2 cm. broad; surface smooth, glabrous, cremeous, margin entire, concolorous, not striate; context very thin, cremeous, without characteristic taste or odor; lamellae somewhat decurrent, broad, subcrowded, becoming fulvous; spores ellipsoid, smooth, very pale yellow under the microscope, 6–7 × 4–5 μ; stipe cylindric, glabrous, cremeous, cartilaginous, hollow, 2–4 cm. long, 1.5–3 mm. thick.

Type collected on rich grassy ground in the open at Stanford University, California, November 27, 1902, *L. R. Abrams & James McMurphy 62* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

11. **Tubaria brevipes** Peck, Harriman Alaska Exp. Crypt. 45. 1904.

Pileus thin, convex, 6–10 mm. broad; surface glabrous, ferruginous; lamellae broad, arcuate, distant, adnate or slightly decurrent, ferruginous; spores ellipsoid, uninucleate, 10–12 × 7–8 μ; stipe short, slender, glabrous, hollow, brown, 6–14 mm. long, scarcely 1 mm. thick.

TYPE LOCALITY: Port Clarence, Alaska.
HABITAT: On the ground.
DISTRIBUTION: Port Clarence, Alaska.

12. **Tubaria tenuis** Peck, Bull. Torrey Club **23**: 415. 1896.

Pileus membranous, hemispheric or convex, obtuse or subumbilicate, 1–1.5 cm. broad; surface glabrous, hygrophanous, reddish-cinnamon when moist, cream-colored or pale-ochraceous when dry, either faintly striate or sulcate-striate on the margin; lamellae distant, ventricose, adnate or slightly decurrent, tawny-ochraceous, 2–4 mm. broad; spores ellipsoid, 7.5 × 5 μ; stipe slender, flexuous, often uneven, hollow, pruinose at the apex, downy at the base, pale-yellow or cream-colored, 2.5–5 cm. long, about 2 mm. thick.

TYPE LOCALITY: Pasadena, California.
HABITAT: Among mosses on gravelly hillsides.
DISTRIBUTION: Known only from the type locality.

13. **Tubaria pallescens** Peck, Bull. Torrey Club **22**: 202. 1895.

Pileus fleshy but thin, convex or nearly plane, sometimes slightly depressed at the center, 1–2 cm. broad; surface glabrous, hygrophanous, brick-red when moist, yellowish or cream-colored when dry; lamellae broad, adnate or slightly decurrent, tawny-buff, becoming brownish-ferruginous; spores ellipsoid, 7.5 × 4 μ; stipe slender, hollow, yellowish, with white mycelium at the base, 2.5–3.5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Pasadena, California.
HABITAT: Among sticks and leaves.
DISTRIBUTION: Known only from the type locality.

14. **Tubaria coniophora** (Berk.) Sacc. Syll. Fung. **5**: 875. 1887.

Agaricus coniophorus Berk. in Warming, Vidensk. Meddel. **1879–80**: 31. 1879.

Pileus circular, convex, 2.5 cm. broad; surface pulverulent, finely rimose, spadiceous; lamellae short-decurrent, concolorous; spores ferruginous; stipe slender, fibrillose, opaque, whitish-mycelioid at the base, 5 cm. long, 4 mm. thick.

TYPE LOCALITY: Near Rio de Janeiro, Brazil.
HABITAT: In soil.
DISTRIBUTION: Island of St. Thomas; also in South America.

DOUBTFUL AND EXCLUDED SPECIES

Tubaria inquilina (Fries) Gill. Champ. Fr. 538. 1876. (*Agaricus inquilinus* Fries, Syst. Myc. **1**: 264. 1821.) Reported from Ohio by Morgan, and also said to occur in Minnesota, California, and other states, but none of the specimens examined appear to agree with European material. The pileus is glabrous, viscid, and striate on the margin when moist.

Tubaria muscorum (Hoffm.) Gill. Champ. Fr. 539. 1876. (*Agaricus muscorum* Hoffm. Nom. Fung. *pl. 5, f. 3.* 1789.) Reported from Pennsylvania, North Carolina, and California as occurring among mosses.

Tubaria paludosa (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 445. 1879. (*Agaricus paludosa* Fries, Epicr. Myc. 209. 1838.) Specimens from Michigan so named by Longyear seem to correspond very well with authentic material from Bresadola, but certain species of *Galerula* or *Naucoria* growing in sphagnum might be easily confused with this species.

66. **GALERULA** P. Karst. Bidr. Finl. Nat. Folk **32**: 442. 1879.

Galera Quél. Champ. Jura Vosg. 103. 1872. Not *Galera* Blume. 1825.
Conocybe Fayod, Ann. Sci. Nat. VII. **9**: 357. 1839.
Galerella Earle, Bull. N. Y. Bot. Gard. **5**: 422. 1909.
Galerina Earl, Bull. N. Y. Bot. Gard. **5**: 423. 1909.

Pileus thin, fleshy, putrescent, solitary or gregarious, conic or convex, the margin straight and appressed when young, rarely plicate-sulcate and splitting over the backs of the lamellae; lamellae adnate or adnexed; spores ochraceous or fulvous; stipe central, slender, tubular, cartilaginous, sometimes conically enlarged at the apex; veil rarely present in young stages, but soon vanishing.

Type species, *Galerula pityria* (Fries) P. Karst.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus 3–10 mm. broad, reaching 15 mm. in *G. Hypni.*
  Stipe 1–2 cm. long.
    Pileus 5 mm. broad, papillate. — 1. *G. parvula.*
    Pileus 10 mm. broad, umbonate. — 2. *G. coniferarum.*
  Stipe 2–5 cm. long.
    Species occurring in bare sandy soil or loam.
      Stipe 5 mm. thick. — 3. *G. glabra.*
      Stipe 10–20 mm. thick. — 4. *G. Besseyi.*
    Species occurring among mosses or grasses in shaded places. — 5. *G. Hypni.*
    Species occurring among grass in the open.
      Pileus 4–6 mm. broad. — 6. *G. capillaripes.*
      Pileus 6–10 mm. broad.
        Pileus campanulate. — 7. *G. fragilis.*
        Pileus hemispheric. — 8. *G. hemisphaerica.*
Stipe 5–7 cm. long; pileus 3–4 mm. broad. — 9. *G. tenerella.*

Pileus 1–3 cm. or more broad.
Stipe 2.5 cm. long.
Stipe white. 10. *G. plicatella.*
Stipe reddish-brown. 11. *G. rufipes.*
Stipe 2.5–5 cm. long, sometimes slightly longer in *G. reticulata.*
Species occurring on dead, coniferous wood; pileus with a conic umbo. 12. *G. lignicola.*
Species occurring on mossy ground; pileus rugosely reticulate. 13. *G. reticulata.*
Species occurring on soil or manure.
Stipe white. 14. *G. Kellermani.*
Stipe reddish-brown or cinnamon.
Pileus striatulate; spores 15–16 μ long. 15. *G. inculta.*
Pileus not striatulate; spores 7.5–8.5 μ long. 16. *G. teneroides.*
Stipe 5–8 cm. long, sometimes shorter in *G. sulcatipes.*
Pileus umbonate, densely tomentose. 17. *G. pulchra.*
Pileus not as above.
Pileus yellow. 18. *G. flava.*
Pileus chestnut-colored. 19. *G. sulcatipes.*
Stipe 8–15 cm. long.
Pileus isabelline to fulvous.
Stipe 1–2 mm. thick. 20. *G. tenera.*
Stipe 2–5 mm. thick.
Species occurring in sphagnum marshes. 21. *G. sphagnorum.*
Species not occurring in sphagnum marshes.
Stipe 8–10 cm. long, 2–3 mm. thick; spores 12–14 μ long. 22. *G. crispa.*
Stipe 15 cm. long, 5 mm. thick; spores 7–8 μ long. 23. *G. tortipes.*
Pileus fuliginous.
Pileus strongly striate to the umbo. 24. *G. striatula.*
Pileus striate on the margin only. 25. *G. crocospora.*

II. SPECIES OCCURRING ON THE PACIFIC COAST

Species occurring on the bark of oak trees; pileus minute, umbilicate. 26. *G. lirata.*
Species occurring in sphagnum marshes. 21. *G. sphagnorum*
Species occurring among mosses or grasses or among leaves in woods.
Pileus subcylindric, acuminate. 27. *G. angusticeps*
Pileus conic to campanulate.
Stipe 2.5–5 cm. long. 5. *G. Hypni.*
Stipe 8–12 cm. long.
Pileus 1–2 cm. broad. 20. *G. tenera.*
Pileus 2–6 cm. broad. 22. *G. crispa.*

III. SPECIES OCCURRING IN TROPICAL NORTH AMERICA

Stipe 7–20 mm. long.
Pileus about 5 mm. broad.
Species occurring on decayed wood. 28. *G. Martiana.*
Species occurring on clay banks. 29. *G. echinospora.*
Pileus about 10 mm. broad. 30. *G. distantifolia.*
Stipe 2.5–5 cm. long.
Pileus cylindric. 31. *G. macromastes.*
Pileus subconic or campanulate. 5. *G. Hypni.*
Pileus becoming depressed with the margin reflexed. 32. *G. reflexa.*
Stipe 8–12 cm. long.
Pileus 1–2 cm. broad. 20. *G. tenera.*
Pileus 2–6 cm. broad.
Margin striatulate. 22. *G. crispa.*
Margin not striatulate. 33. *G. mexicana.*

1. **Galerula parvula** Murrill, sp. nov.

Pileus very small, thin, convex to expanded, conspicuously papillate, gregarious, 5 mm. broad; surface dry, smooth, glabrous, ochroleucous, margin fulvous, undulate, straight and appressed when young; lamellae adnate, ventricose, subcrowded, several times inserted, becoming fulvous, whitish and very slightly dentate on the edges; spores ovoid, smooth, melleous under the microscope, 7–8 × 4–5 μ; stipe slender, cylindric, equal, smooth, glabrous, fulvous, 1–1.5 cm. broad, less than 1 mm. thick.

Type collected in soil in woods at Unaka Springs, Tennessee, August 18–24, 1904, *W. A. Murrill 786* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

2. **Galerula coniferarum** Murrill, sp. nov.

Pileus conic to campanulate, not fully expanding, umbonate, gregarious, reaching 1 cm. broad; surface glabrous, dull-fulvous and somewhat striate, becoming isabelline and estriate

with the escape of moisture, margin entire, concolorous, straight and appressed when young; lamellae sinuate, rounded behind, distant, becoming fulvous, entire and concolorous on the edges; spores ovoid, smooth, melleous under the microscope, 7–8 × 3.5–5 μ; stipe very slender, equal, smooth, glabrous, pale-bay, 1–2 cm. long, less than 1 mm. thick.

Type collected on dead coniferous wood in woods at Lake Placid, Adirondack Mountains, New York, October 3–14, 1912, *W. A. & Edna L. Murrill 536* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Vicinity of Lake Placid, New York.

3. **Galerula glabra** Murrill, sp. nov.

Pileus conic to campanulate, not expanding, solitary, reaching 8 mm. broad; surface moist, not striate, entirely smooth and glabrous, uniformly dull-isabelline with a fulvous tint; lamellae adnate or adnexed, attenuate behind, very regular, not crowded, somewhat ventricose, dull-isabelline to fulvous, whitish-pruinose on the edges; spores ellipsoid, smooth, ferruginous under the microscope, 12–14 × 6–7 μ; stipe slender, equal, smooth, glabrous, concolorous, paler and pruinose at the apex, 2.5 cm. long, 0.5 mm. thick.

Type collected in soil on the side of a bank in the open at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 99* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

4. **Galerula Besseyi** (Peck) Murrill.

Galera Besseyi Peck, Bull. N. Y. State Mus. 131: 35. 1909.

Pileus thin, ovoid, rarely subglobose, obtuse, never expanding, 5–12 mm. high, 4–10 mm. broad; surface glabrous, isabelline or pale-dingy-ochraceous, the margin abruptly contracted and closely embracing the stipe; lamellae thin, crowded, ascending, adnate, ferruginous-brown; spores broadly ellipsoid, 13.5–16.5 × 10–12.5 μ; stipe slender, slightly flexuous, hollow, glabrous, even or slightly striate, concolorous, 2.5–5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Garden of the Gods, El Paso County, Colorado.
HABITAT: On sandy soil.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Bull. N. Y. State Mus. 131: *pl. V, f. 15–20.*

5. **Galerula Hypni** (Batsch) Murrill.

Agaricus Hypni Batsch, Elench. Fung. Contin. **1**: 117. 1786.
Agaricus hypnorum Schrank, Baier. Fl. **2**: 605. 1789.
Agaricus bryorum Lasch, Linnaea **3**: 416. 1828.
Galera hypnorum Quél. Champ. Jura Vosg. 105. 1872.
Galera bryorum Quél. Fl. Myc. Fr. 78. 1888.
Galera bryophila Peck, Ann. Rep. N. Y. State Mus. **54**: 149. 1901.
Conocybe hypnorum Murrill, Mycologia **4**: 75. 1912.
Conocybe bryorum Murrill, Mycologia **4**: 247. 1912.

Pileus thin, membranous, subconic or campanulate, obtuse or papillate, 5–15 mm. broad; surface glabrous, hygrophanous, watery-cinnamon or subochraceous and striatulate when moist, becoming paler when dry, often fading to yellowish or buff, margin usually striate; lamellae thin, broad, distant, adnate, ventricose, white or whitish, becoming ochraceous-yellow, often whitish-floccose on the edges; spores ovoid, pointed, smooth, uniguttulate, 8–12 × 5–7 μ; cystidia flask-shaped, 40–45 μ long, 8–10 μ thick at the base; stipe slender, flexuous, hollow, smooth or slightly silky-fibrillose, downy or pruinose at the apex, with a white mycelioid tomentum at the base, whitish or pallid, varying to fuliginous, 2.5–5 cm. long, about 1 mm. thick; veil slight, evanescent.

TYPE LOCALITY: Germany.
HABITAT: Among mosses or grasses in shaded places.
DISTRIBUTION: Throughout temperate North America, and in the mountains of Mexico and Jamaica; also in Europe.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **54**: *pl. G, f. 15–21;* Batsch, Elench. Fung. *f. 96;* Cooke, Brit. Fungi *pl. 465 (523);* Gill. Champ. Fr. *pl. 376 (295);* Lucand, Champ. Fr. *pl. 61;* Pat. Tab. Fung. **1**: *f. 230;* Ricken, Blätterp. Deutschl. *pl. 60, f. 8.*
EXSICCATI: Thüm. Fungi Austr. *803.*

6. **Galerula capillaripes** (Peck) Murrill.

Galera capillaripes Peck, Bull. Torrey Club **26**: 66. 1899.

Pileus subcampanulate, obtuse, 4–6 mm. broad; surface ferruginous when moist, becoming paler or buff on drying, glabrous, hygrophanous, margin faintly striatulate when moist; lamellae

adnate, subdistant, rather broad, pale-ferruginous; spores 8–12 × 6–7 μ; stipe very slender, flexuous, glabrous, concolorous, 2–3 cm. long, less than 1 mm. thick.

TYPE LOCALITY: Ohio.
HABITAT: On lawns and grassy places.
DISTRIBUTION: New York to Michigan and south to Ohio and Missouri.

7. **Galerula fragilis** (Peck) Murrill.

Galera fragilis Peck, Bull. Torrey Club **24**: 144. 1897.

Pileus submembranous, very fragile, broadly campanulate, 6–10 mm. broad; surface glabrous, dull-flesh-colored; lamellae ascending, adnate, subdistant, dark-yellow or subochraceous, becoming ferruginous; spores ellipsoid, 10 × 5 μ; stipe slender, flexuous, hollow, 2–3 cm. long, 1 mm. thick.

TYPE LOCALITY: Rooks County, Kansas.
HABITAT: Among short grasses in pasture.
DISTRIBUTION: Known only from the type locality.

8. **Galerula hemisphaerica** Murrill, sp. nov.

Pileus hemispheric, not expanding, neither umbonate nor depressed, solitary, 1 cm. broad; surface smooth, dry, glabrous, isabelline, margin entire, concolorous, striate, straight and appressed when young; lamellae adnate, ventricose, subcrowded, ochraceous-ferruginous, becoming darker, whitish-pruinose on the edges; spores ellipsoid, smooth, ferruginous under the microscope, 8–9 × 4–5 μ; stipe tapering upward, slender, smooth, glabrous, white, 3 cm. long, 1–2 mm. thick.

Type collected in grass on a lawn at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 145* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

9. **Galerula tenerella** (Atk.) Murrill.

Galera tenerella Atk. Ann. Myc. **7**: 369. 1909.

Pileus thin, campanulate, gregarious, 3–4 mm. broad and high; surface smooth, ochraceous, with a whitish bloom; lamellae subelliptic, narrow, adnexed, concolorous, whitish on the edges; spores broadly ellipsoid, smooth, yellowish, 14–16 × 8–10 μ; stipe even, concolorous, pruinose at the apex, and over the entire length when young and fresh, 5–7 cm. long, 1–1.5 mm. thick.

TYPE LOCALITY: Ithaca, New York.
HABITAT: On manure in pots in a palm house.
DISTRIBUTION: Known only from the type locality.

10. **Galerula plicatella** (Peck) Murrill.

Agaricus coprinoides Peck, Bull. Buffalo Soc. Nat. Sci. **1**: 52. 1873. Not *A. coprinoides* Corda, 1837.
Agaricus plicatellus Peck, Ann. Rep. N. Y. State Mus. **29**: 66. 1878.
Galera coprinoides Sacc. Syll. Fung. **5**: 867. 1887.
Galera plicatella Earle, Torreya **3**: 136. 1903.

Pileus membranous, campanulate, soon expanded, about 12 mm. broad; surface yellowish or ochraceous-yellow, plicate, sulcate to the small, even disk, often split on the margin; lamellae narrow, crowded, rounded behind, concolorous; spores ellipsoid, 7–7.5 × 5 μ; stipe slender, equal, hollow, minutely hairy or pruinose, white, about 2.5 cm. long and 1 mm. thick.

TYPE LOCALITY: Sterling, New York.
HABITAT: On grassy ground.
DISTRIBUTION: New York.

11. **Galerula rufipes** (Peck) Murrill.

Galera rufipes Peck, Ann. Rep. N. Y. State Mus. **42**: 116 (20). 1889.

Pileus campanulate or convex, 1–1.5 cm. broad; surface hygrophanous, reddish-tawny and striatulate when moist, pale-ochraceous when dry, whitened on the margin by the remains of the white, fibrillose veil; lamellae broad, subdistant, emarginate, yellowish or subochraceous, slightly crenulate on the whitish edges; spores subochraceous, 6–7.5 × 4–5 μ; stipe slender,

hollow, slightly fibrillose below, pruinose at the apex, reddish-brown, about 2.5 cm. long and 1 mm. thick.

TYPE LOCALITY: North Elba, New York.
HABITAT: On mossy ground in woods.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **42**: *pl. 2, f. 11–15.*

12. **Galerula lignicola** Murrill, sp. nov.

Pileus thin, plane, with a very small, conic umbo, gregarious, 2 cm. broad; surface glabrous, dull-watery-isabelline, striate, margin entire, concolorous, brown in dried specimens; lamellae sinuate, narrow, crowded, fulvous, finely serrulate on the edges; spores ellipsoid, smooth, melleous under the microscope, 7 × 4–5 μ; stipe slender, subequal, smooth, glabrous, latericious, whitish-mycelioid at the base, 3 cm. long, 2 mm. thick.

Type collected on decayed coniferous wood at Lake Placid, Adirondack Mountains, New York, October 3–14, 1912, *W. A. & Edna L. Murrill 1043* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

13. **Galerula reticulata** (Peck) Murrill.

Galera reticulata Peck, Ann. Rep. N. Y. State Mus. **54**: 150. 1901.

Pileus thin, fragile, hemispheric or campanulate, obtuse, 1–2.5 cm. broad; surface hygrophanous, cinnamon-colored when moist, creamy-yellow or buff when dry, rugosely reticulate; context white or whitish; lamellae narrow, crowded, ascending, yellowish, becoming bright-ferruginous; spores ellipsoid, ferruginous, 7.5 × 4–5 μ; stipe slender, equal, hollow, slightly pruinose, striate at the apex, white, 2.5–6.5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Ithaca, New York.
HABITAT: On mossy ground.
DISTRIBUTION: Known only from the type locality.

14. **Galerula Kellermani** (Peck) Murrill.

Galera Kellermani Peck, Jour. Myc. **12**: 148. 1906.

Pileus very thin, subovoid or subconic, soon becoming plane or nearly so, gregarious or subcespitose, 2–3 cm. broad; surface striatulate nearly to the center and watery-brown when moist, grayish-brown when dry, a little darker at the center, minutely granulose or mealy and often with a few scattered, floccose squamules when young, unpolished when mature; margin more or less wavy and persistently striate when dry, sometimes slightly appendiculate and appearing as though slightly notched by the projecting ends of the lamellae; context having a slight taste and a faint odor, like that of decaying wood; lamellae thin, crowded, adnate, delicate cinnamon-brown, becoming darker with age; spores brownish-ferruginous, with a faint pinkish tint in mass, 8–12 × 6–7 μ; stipe slender, equal or slightly tapering upward, finely striate, minutely scurfy or mealy, at least when young, hollow, white, 2.5–4 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Columbus, Ohio.
HABITAT: On the ground in a greenhouse.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Hard, Mushr. *f. 224, 225;* Jour. Myc. **12**: *pl. 89.*

15. **Galerula inculta** (Peck) Murrill.

Galera inculta Peck, Ann. Rep. N. Y. State Mus. **41**: 69. 1888.

Pileus thin, somewhat fragile, campanulate, becoming convex or nearly plane, obtuse or rarely with a small umbo, 1.2–2.5 cm. broad; surface hygrophanous, cinnamon-colored and striatulate when moist, buff-colored and granulate when dry, sometimes minutely pitted or corrugated, rarely rimose-squamulose; lamellae broad, subdistant, ventricose, adnexed, at first pallid, then pale-cinnamon, white and crenulate on the edges; spores subellipsoid, pointed at each end, brownish-ferruginous, 15–16 × 7.5 μ; stipe straight or subflexuous, hollow, brittle, slightly silky, reddish-brown, sometimes mealy or pruinose at the apex and white-villose at the base, 2.5–3.5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Catskill Mountains, New York.
HABITAT: On damp ground under willows and alders.
DISTRIBUTION: New York.

16. **Galerula teneroides** (Peck) Murrill.

Agaricus teneroides Peck, Ann. Rep. N. Y. State Mus. **29**: 39. 1878.
Galera teneroides Sacc. Syll. Fung. **5**: 861. 1887.

Pileus thin, campanulate or expanded, gregarious, 1–2.5 cm. broad; surface hygrophanous, brownish-cinnamon when moist, paler when dry; lamellae narrow, crowded, yellowish-cinnamon; spores nearly ellipsoid, subluteous, 7.5–8.5 × 4–5 μ; stipe straight, slender, hollow, concolorous, 2.5–5 cm. long, about 1 mm. thick.

TYPE LOCALITY: Greig, New York.
HABITAT: On soil or manure in woods.
DISTRIBUTION: New York.

17. **Galerula pulchra** (Clements) Murrill.

Galera pulchra Clements, Bot. Surv. Neb. **4**: 22. 1896.

Pileus membranous, conic, broad, umbonate, 2.5 cm. broad; surface densely silky-tomentose, ochraceous or cream-colored, margin striate-sulcate to the center; lamellae adnexed, slightly crowded, linear, subcurved, ochraceous; spores nearly lemon-shaped, fulvous, 15–16 × 9–10 μ; stipe elongate, cartilaginous, attenuate, striate, pruinose, yellowish-white, hollow, 7–8 cm. long, 2 mm. thick.

TYPE LOCALITY: Otowanie Woods, Nebraska.
HABITAT: On rich, moist ground.
DISTRIBUTION: Known only from the type locality.

18. **Galerula flava** (Peck) Murrill.

Galera flava Peck, Ann. Rep. N. Y. State Mus. **45**: 79 (19). 1893.

Pileus membranous, ovoid or campanulate, obtuse, 1.2–2.5 cm. broad; surface moist or subhygrophanous, yellow, the pellicle sometimes cracking into squamules, margin plicate-striate; lamellae thin, narrow, crowded, adnate, at first whitish, becoming yellowish-cinnamon; spores ovoid or subellipsoid, brownish-ferruginous, 12.5 × 7.5 μ; stipe equal or slightly tapering upward, hollow, slightly striate at the apex, sprinkled with white, mealy particles, white or yellowish, 5–7.5 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Freeville, Tompkins County, New York.
HABITAT: On damp vegetable mold in woods.
DISTRIBUTION: Known only from the type locality.

19. **Galerula sulcatipes** (Peck) Murrill.

Agaricus sulcatipes Peck, Ann. Rep. N. Y. State Mus. **35**: 132. 1884.
Galera sulcatipes Sacc. Syll. Fung. **5**: 866. 1887.

Pileus thin, ovoid, conic or subcampanulate, gregarious, 1–1.5 cm. broad; surface hygrophanous, chestnut-colored and mostly striatulate on the margin when moist, paler when dry; lamellae ascending, subdistant, adnate, whitish, becoming ferruginous-cinnamon; spores ellipsoid, ferruginous-cinnamon, 6–7.5 × 4 μ; stipe slender, straight or flexuous, equal, hollow, rather tenacious, striate-sulcate, silky, floccose-pruinose toward the base, white, 3.5–7.5 cm. long, about 2 mm. thick.

TYPE LOCALITY: East Berne, New York.
HABITAT: On a pile of buckwheat bran in woods.
DISTRIBUTION: Known only from the type locality.

20. **Galerula tenera** (Schaeff.) Murrill.

Agaricus tener Schaeff. Fung. Bavar. **4**: Ind. 31. 1774.
Galera tenera Quél. Champ. Jura Vosg. 104. 1872.
Conocybe tenera Fayod, Ann. Sci. Nat. VII. **9**: 357. 1899.
Galera cubensis Earle, Inform. An. Estaç. Centr. Agron. Cuba **1**: 237. 1906.

Pileus thin, conic to campanulate, 1–2 cm. broad and high; surface glabrous to slightly pubescent, tan or brownish, slightly darker at the center, hygrophanous, ochraceous when dry, margin striatulate when moist; lamellae adnexed, ascending, crowded, fulvous; spores ellipsoid, smooth, dark-ferruginous, 12–14 × 6–8 μ; cystidia flask-shaped, 10 μ at the base;

stipe slender, equal, subconcolorous, glabrous to slightly pubescent, hollow, fragile, 8–12 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Bavaria.
HABITAT: On lawns and in manured pastures, rarely in woods.
DISTRIBUTION: Throughout temperate and tropical North America; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 461 (518);* Hard, Mushr. *f. 223;* Ricken, Blätterp. Deutschl. *pl. 60, f. 10;* Schaeff. Fung. Bavar. *pl. 70, f. 6–8;* Sow. Engl. Fungi *pl. 33.*

21. **Galerula sphagnorum** (Pers.) Murrill.

Agaricus hypnorum sphagnorum Pers. Syn. Fung. 386. 1801.
Agaricus sphagnorum Lasch, Linnaea **3**: 417. 1828.
Galera sphagnorum Sacc. Syll. Fung. **5**: 869. 1887.
Conocybe sphagnorum Murrill, Mycologia 4: 248. 1912.

Pileus thin, conic-convex or expanded, sometimes with a small umbo or papilla, 1.5–3 cm. broad; surface hygrophanous, tawny or subochraceous and usually striate on the margin when moist, pale-ochraceous or buff when dry; lamellae thin, subdistant, tawny-ochraceous; spores ellipsoid or subovoid, 10–12 × 6–8 μ; stipe slender, hollow, more or less fibrillose, subflexuous, concolorous, 8–15 cm. long, 2–4 mm. thick; veil quite evident at times.

TYPE LOCALITY: Europe.
HABITAT: In sphagnum marshes.
DISTRIBUTION: Northern United States and Canada; also in Europe.

22. **Galerula crispa** (Longyear) Murrill.

Agaricus lateritius Fries, Syst. Myc. **1**: 265. 1821. Not *A. lateritius* Schaeff. 1774.
Galera lateritia Quél. Champ. Jura Vosg. 337. 1873.
Galera crispa Longyear, Bot. Gaz. **28**: 272. 1899.
Galera simulans Earle, Inform. An. Estaç. Centr. Agron. Cuba **1**: 236. 1906.
Galera grisea Earle, Inform. An. Estaç. Centr. Agron. Cuba **1**: 237. 1906.

Pileus thin, narrowly conic or acorn-shaped, often becoming campanulate, 2–6 cm. broad; surface hygrophanous, isabelline to fulvous when moist, whitish or ochraceous when dry, margin finely striate; lamellae narrow or linear, crowded, ascending, nearly free, pale-cinnamon or tawny-ferruginous; spores ellipsoid, ferruginous, 12–14 × 8–10 μ; stipe straight, slender, fragile, hollow, minutely striate, sprinkled with minute, mealy particles or clothed with a minute villosity, white or yellowish, 8–10 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Michigan.
HABITAT: On manure or rich cultivated or grassy ground.
DISTRIBUTION: Maine to Cuba and Jamaica and west to California; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 460 (517);* Fries, Ic. Hymen. *pl. 127, f. 2;* Hard, Mushr. *f. 226;* Mycologia **3**: *pl. 40, f. 6.* (as *Conocybe tener*); Ricken, Blätterp. Deutschl. *pl. 60, f. 11.*

23. **Galerula tortipes** (Mont.) Murrill.

Agaricus tortipes Mont. Syll. Crypt. 119. 1856.
Galera tortipes Sacc. Syll. Fung. **5**: 867. 1887.

Pileus submembranous, convex, campanulate, 3.5–4 cm. broad; surface fulvous, margin striate, crenulate, splitting; lamellae adnexed, crowded, several times inserted, linear, fulvous to cinnamon, paler on the edges; spores ellipsoid, fulvous, 7–8 × 4–5 μ; stipe long, twisted, striate, fulvous, hollow, 15 cm. long, 5 mm. thick.

TYPE LOCALITY: Columbus, Ohio.
HABITAT: In woods.
DISTRIBUTION: Known only from the type locality.

24. **Galerula striatula** (Clements) Murrill.

Galera striatula Clements, Bot. Surv. Neb. **3**: 13. 1894.

Pileus membranous, campanulate, convex, 1.5–2 cm. broad; surface silky-atomaceous, soot-brown, strongly striate to the umbo, which is smooth, glabrous, brown; lamellae free, remote, affixed to a collar, narrow, ochraceous-rubiginous; spores ellipsoid, 12–15 × 7–8 μ; stipe elongate, equal, white, becoming rufescent, glabrous, 9–10 cm. long, 2 mm. thick.

TYPE LOCALITY: Lincoln, Nebraska.
HABITAT: On moist ground.
DISTRIBUTION: Known only from the type locality.

25. **Galerula crocospora** (Berk. & Curt.) Murrill.

Agaricus crocosporus Berk. & Curt. Ann. Mag. Nat. Hist. II. 12: 421. 1853.
Galera crocospora Sacc. Syll. Fung. 5: 866. 1887.

Pileus membranous, conic to convex, becoming depressed, gregarious, 2.5 cm. or more broad; surface sordid-brown, expallent, viscid, smooth on the disk, margin sulcate; lamellae adnate, numerous, pale-ferruginous, becoming saffron-yellow; spores large, ellipsoid, subcymbiform; stipe slender, white, silky-shining, fistulose, thickened at the base, 8–10 cm. long.

TYPE LOCALITY: South Carolina.
HABITAT: On a moist straw mat in a house.
DISTRIBUTION: Known only from the type locality.

26. **Galerula lirata** (Berk. & Curt.) Murrill.

Agaricus liratus Berk. & Curt. Proc. Am. Acad. 4: 116. 1858.
Galera lirata Sacc. Syll. Fung. 5: 865. 1887.

Pileus very small, umbilicate, resembling *Prunulus corticalis* in form and habit; surface reddish, granulate, sulcate; lamellae adnate, few, broad; stipe short, slender, cartilaginous.

TYPE LOCALITY: Mare Island, California.
HABITAT: On the bark of oak trees.
DISTRIBUTION: Known only from the type locality.

27. **Galerula angusticeps** (Peck) Murrill.

Galera angusticeps Peck, Bull. Torrey Club **24**: 143. 1897.
Conocybe angusticeps Murrill, Mycologia 4: 248. 1912.

Pileus thin, narrowly and irregularly conic or subcylindric, obtuse, acute, or abruptly acuminate at the apex, 1.5–3 cm. long, 8–12 mm. wide; surface even, glabrous, viscid and dark-ochraceous when young and moist, nearly white when old and dry, margin somewhat incurved and appressed to the stipe; lamellae crowded, narrow, adnate, somewhat white-margined, more or less anastomosing, brownish-ferruginous when mature; spores ellipsoid, 10–12.5 × 7.5 μ; stipe slender, glabrous, hollow, equal or slightly thickened at the base, whitish or tinged with yellow, shining when dry, 3.5–7.5 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Pasadena, California.
HABITAT: On grassy ground in streets and pastures.
DISTRIBUTION: California.

28. **Galerula Martiana** (Berk. & Curt.) Murrill.

Agaricus Martianus Berk. & Curt. Jour. Linn. Soc. **10**: 291. 1868.
Galera Martiana Sacc. Syll. Fung. 5: 864. 1887.

Pileus thin, plane, umbonate, 6 mm. broad; surface glabrous, helvolous; lamellae free, broad, ventricose, pale-ferruginous; spores ochraceous; stipe slender, capillary, thicker above and below, 18 mm. long.

TYPE LOCALITY: Cuba.
HABITAT: On dead wood.
DISTRIBUTION: Cuba and Guadeloupe.

29. **Galerula echinospora** Murrill.

Conocybe echinospora Murrill, Mycologia 4: 75. 1912.
Galera echinospora Murrill, Mycologia 4: 332. 1912.

Pileus conic to campanulate or convex, umbonate, solitary, 5 mm. broad and high; surface glabrous, dry, striate, fulvous-isabelline, isabelline on the umbo, margin straight, appressed, entire; lamellae broad, distant, fulvous-isabelline; spores broadly ovoid, pointed at one end, minutely echinulate, ferruginous, 7–8 × 4–5 μ; stipe glabrous, smooth, slightly tapering upward, very pale latericeous, 1–1.5 cm. long, less than 1 mm. thick.

TYPE LOCALITY: Cinchona, Jamaica.
HABITAT: On a clay bank.
DISTRIBUTION: Known only from the type locality.

30. **Galerula distantifolia** Murrill, sp. nov.

Pileus small, thin, convex to plane or somewhat irregular, solitary, scarcely 1 cm. broad; surface smooth, glabrous, hygrophanous, uniformly fulvous, striate, margin entire, concolorous, straight and appressed when young, not incurved but slightly revolute on drying; lamellae adnate, broad, distant, pale-isabelline to somewhat darker; spores ellipsoid, smooth, 1–2-guttulate, pale-yellow under the microscope, 7–9 × 3.5–5 μ; stipe very short, subequal, smooth, pale-fulvous, glabrous above, tomentose at the base, 7–10 mm. long, 1 mm. thick.

Type collected on decayed wood in woods at Motzorongo, near Cordoba, Mexico, January 15, 1910, *W. A. & Edna L. Murrill 1043* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

31. **Galerula macromastes** (Fries) Murrill.

Agaricus macromastes Fries, Nova Acta Soc. Sci. Upsal. III. 1: 226. 1851.
Galera macromastes Sacc. Syll. Fung. 5: 866. 1887.

Pileus membranous to coriaceous, cylindric to conic, umbonate, 1–4 cm. high; surface very glabrous, pallid, margin straight, appressed to the stipe; lamellae crisped, free, discrete, sublinear, at first cohering; spores ochraceous-ferruginous; stipe glabrous, pallid, hollow, firm, conic to elongate, 3.5–4 cm. long, 6–12 mm. thick at the base, 4 mm. at the apex.

TYPE LOCALITY: Island of St. Thomas.
DISTRIBUTION: Known only from the type locality.

32. **Galerula reflexa** Murrill, sp: nov.

Pileus thin, becoming depressed at maturity, with the margin reflexed, solitary, 1.5 cm. broad; surface smooth, glabrous, slightly viscid, cream-colored, margin concolorous, not striate, becoming undulate or slightly lacerate with age; lamellae adnate, ventricose, fulvous at the maturity of the spores, entire and concolorous on the edges; spores ovoid, smooth, granular, yellow under the microscope, 8–9 × 5–6 μ; stipe slender, subequal, smooth, glabrous, pale-yellow above, slightly reddish-brown below, 3 cm. long, 1.5 mm. thick.

Type collected on the ground in humus in the Tepeite Valley, near Cuernavaca, Mexico, December 28, 1909, *W. A. & Edna L. Murrill 488* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

33. **Galerula mexicana** Murrill, sp. nov.

Pileus subhemispheric, not umbonate, solitary, 3 cm. broad; surface smooth, moist, glabrous, uniformly ochroleucous, margin entire, concolorous, not striate; lamellae adnexed, broad, subcrowded, isabelline, becoming darker at maturity, whitish and slightly crenulate on the edges; spores ellipsoid, smooth, ferruginous under the microscope, usually 1–2-guttulate, 12–15 × 7–9 μ; stipe erect, perfectly equal, tough, fistulose, stramineous, 11 cm. long, 3 mm. thick.

Type collected in grass by the roadside at Jalapa, Mexico, 1,500 m. elevation, December 12–20, 1909, *W. A. & Edna L. Murrill 139* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

DOUBTFUL AND EXCLUDED SPECIES

Agaricus flocculentus? Fries, Nova Acta Soc. Sci. Upsal. III. 1: 24. 1851. Collected and figured by Oersted in Costa Rica. There can be little doubt that this is referable to *Galerula tenera* or *G. crispa*. The species referred to in Epicr. Myc. 209 is *Galera frustulenta*, now placed in *Psathyra*.

Galera antipoda (Lasch) Quél. Champ. Jura Vosg. 104. 1872. (*Agaricus antipus* Lasch, Linnaea 3: 415. 1828.) Reported from Michigan by Kauffman, as occurring there on manure heaps. It is recognized by its radicate stipe.

Galera aquatilis (Fries) P. Karst. Bidr. Finl. Nat. Folk 32: 442. 1879. (*Agaricus hypnorum aquatilis* Fries, Syst. Myc. 1: 267. 1821. *Agaricus aquatilis* Fries, Epicr. Myc. 208. 1838.) Reported from the Catskill Mountains, New York, by Peck, but these specimens appear to be a form of *Galerula Hypni*.

Galera mniophila (Lasch) P. Karst. Bidr. Finl. Nat. Folk **32**: 441. 1879. (*Agaricus mniophila* Lasch, Linnaea **3**: 417. 1828.) Reported from Greenland by Rostrup. This species seems very near *Galera bryophila* Peck, which I have included in *Galerula Hypni*, although it is in some ways intermediate between *G. Hypni* and *G. sphagnorum*.

Galera ovalis (Fries) Gill. Champ. Fr. 554. 1876. (*Agaricus ovalis* Fries, Monog. Hymen. Suec. **1**: 389. 1857.) Reported from many parts of the United States, but probably confused with forms of *G. tenera* and *G. lateritia*. Peck says it is evidently rare, since he found it only once.

Galera pubescens Gill. Champ. Fr. 553. 1876. Reported from Michigan by Kauffman. Gillet's figures do not seem so different from what we have called *G. crispa*, with the exception of the conspicuous pubescence. Both *G. crispa* and *G. tenera* have finely pubescent forms.

Galera rubiginosa (Pers.) P. Karst. Bidr. Finl. Nat. Folk **32**: 440. 1879. (*Agaricus rubiginosus* Pers. Syn. Fung. 385. 1801.) Reported from North Carolina by Schweinitz, but he may have confused it with *G. tenera*.

Galera semilanceata Peck, Bull. Torrey Club **23**: 415. 1896. Described from specimens collected by Yeomans among mosses, etc., at Camas, Washington. The types at Albany are somewhat broken and rather difficult to compare, but the description agrees very closely with that of *G. Hypni*.

Galera siliginea (Fries) Quél. Champ. Jura Vosg. 104. 1872. (*Agaricus siligineus* Fries, Obs. Myc. **2**: 168. 1818.) Reported from Ohio. The species resembles *G. crispa*, but has a shorter stipe.

67. NAUCORIA (Fries) Quél. Champ. Jura Vosg. 99. 1872.

Agaricus § *Naucoria* Fries, Syst. Myc. **1**: 260. 1821.
Bulla Batt. (Fung. Hist. 57, hyponym. 1755); Earle, Bull. N. Y. Bot. Gard. **5**: 424. 1909.
Flammulaster Earle, Bull. N. Y. Bot. Gard. **5**: 435. 1909.

Pileus fleshy, putrescent, glabrous, silky, or squamulose, the margin incurved when young; lamellae adnate or adnexed; spores ochraceous, ferruginous, or fulvous; stipe central, slender, tubular, cartilaginous; veil rarely present in young stages but disappearing without forming an annulus.

Type species, *Naucoria melinoides* (Bull.) Quél.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus livid-yellowish-green. — 1. *N. centuncula.*
Pileus dingy-ocher or subolivaceous, brown or blackish-brown on the disk. — 2. *N. lenticeps.*
Pileus livid or grayish-brown. — 3. *N. elatior.*
Pileus reddish-yellow, varying at times to pale-yellow.
  Stipe short, 2–3 cm. long. — 4. *N. arenaria.*
  Stipe long, reaching 7.5 cm. long. — 5. *N. curvomarginata.*
Pileus variable in color, blood-red, cinnamon, and rusty-red, becoming black on drying, sharply conic. — 6. *N. Christinae.*
Pileus bay, latericious, or reddish-brown.
  Pileus 4–10 mm. broad, bay. — 7. *N. triscopoda.*
  Pileus 1–1.5 cm. broad, latericious. — 8. *N. lateritia.*
  Pileus 2.5–4 cm. broad, reddish-brown. — 9. *N. discomorbida.*
Pileus yellowish, isabelline, ferruginous, fulvous, or yellowish-brown.
  Pileus 1–2.5 cm. broad.
    Surface glabrous.
      Stipe 2.5 cm. long. — 10. *N. unicolor.*
      Stipe 2.5–5 cm. long.
        Species occurring on the ground in pastures. — 11. *N. pascuensis.*
        Species occurring on the ground in pine woods. — 12. *N. subfulva.*
        Species occurring on dead wood. — 13. *N. praecox.*
    Stipe 7–12 cm. long.
      Spores 5–6 μ long. — 14. *N. scorpioides.*
      Spores 12–17 μ long.
        Pileus cremeous. — 15. *N. humidicola.*
        Pileus ferruginous. — 16. *N. temulenta.*
  Surface floccose or squamulose, sometimes becoming glabrous with age.
    Species occurring on mud. — 17. *N. siparioides.*
    Species occurring in sphagnum. — 18. *N. sphagnophila.*
    Species occurring on dead wood or dead herbaceous stems.
      Stipe 1 mm. thick. — 19. *N. scirpicola.*

Stipe 2–3 mm. thick.
Stipe brownish, solid. 20. *N. Curcuma.*
Stipe isabelline, hollow. 21. *N. pennsylvanica.*
Pileus 2.5–5 cm. broad.
Surface glabrous.
Stipe 2–5 mm. thick.
Context decidedly bitter, becoming farinaceous. 22. *N. amara.*
Context not bitter. 23. *N. semiorbicularis.*
Stipe 13–15 mm. thick. 24. *N. striata.*
Surface decorated with appressed, clay-brown scales. 25. *N. paludosella.*
Pileus 5–10 cm. broad.
Stipe white. 26. *N. argillosa.*
Stipe pale-tawny. 27. *N. sororia.*
Pileus umbrinous, brown, or blackish-brown, at least when moist, often paler on drying, mostly 1–2 cm. broad.
Surface velvety-tomentose. 28. *N. velutina.*
Surface glabrous or nearly so.
Species occurring on the ground in woods; pileus reaching 3.5 cm. broad. 29. *N. pruinatipes.*
Species occurring in swamps or marshy ground; pileus reaching 2.5 cm. broad. 30. *N. pallidomarginata.*
Species occurring on dead wood in woods.
Stipe reaching 2–2.5 cm. long.
Pileus 1 cm. broad. 31. *N. umbriniceps.*
Pileus 2–2.5 cm. broad. 32. *N. serrulata.*
Stipe reaching 5 cm. long.
Pileus umbonate, margin striate. 33. *N. lignicola.*
Pileus not as above. 34. *N. firma.*

II. Species occurring on the Pacific coast

Pileus whitish, tinged with yellow when young; spores very large, 15 × 12.5 μ. 35. *N. platysperma.*
Pileus cream-colored or isabelline, rarely darker on the margin.
Pileus 1–1.5 cm. broad.
Surface finely whitish-pubescent. 36. *N. pubescens.*
Surface glabrous.
Pileus not umbonate. 37. *N. tubariiformis.*
Pileus conspicuously umbonate. 38. *N. mammillata.*
Pileus 2–3.5 cm. broad.
Stipe 1–1.5 cm. long. 39. *N. caespitosa.*
Stipe 3–5 cm. long.
Margin of pileus brown. 40. *N. brunneimarginata.*
Margin of pileus concolorous, isabelline.
Margin of pileus striate. 41. *N. Harperi.*
Margin of pileus not striate. 42. *N. Pattersonae.*
Stipe 6–8 cm. long. 43. *N. washingtonensis.*
Pileus fulvous or ferruginous, sometimes fading with age or on drying.
Surface hispid-squamulose, pale-fulvous. 21. *N. pennsylvanica.*
Surface glabrous.
Stipe 1.5–2 cm. long. 44. *N. californica.*
Stipe 4–9 cm. long.
Pileus umbonate; stipe long-radicate. 45. *N. radicata.*
Pileus not umbonate; stipe not radicate. 23. *N. semiorbicularis.*
Pileus brown and striatulate when moist, buff-yellow when dry. 30. *N. pallidomarginata.*
Pileus bay or wine-colored.
Surface glabrous.
Pileus bay. 46. *N. sphagnorum.*
Pileus wine-colored. 47. *N. vinicolor.*
Surface hispid-squamulose. 48. *N. badia.*

III. Species occurring in tropical North America

Pileus white or whitish.
Surface glabrous.
Pileus convex, 1 cm. broad. 49. *N. tepeitensis.*
Pileus umbonate, 2.5 cm. broad. 50. *N. jalapensis.*
Surface papulose; pileus 2.5–5 cm. broad. 51. *N. papularis.*
Pileus dull-olivaceous, 1 cm. broad. 52. *N. subolivacea.*
Pileus testaceous with bay umbo, 7 mm. broad. 53. *N. pellucida.*
Pileus vinosous, 6–8 mm. broad. 54. *N. oinodes.*
Pileus ochraceous, isabelline, or fulvous, sometimes differently colored on the disk.
Pileus 0.7–1.5 cm. broad.
Surface glabrous. 55. *N. hepaticicola.*
Surface innate-fibrillose.
Lamellae pale-ochraceous at maturity. 56. *N. cyathicola.*
Lamellae bay-fulvous at maturity. 57. *N. corticola.*
Surface hispid-squamulose. 58. *N. mexicana.*
Pileus 2–5 cm. broad.

Stipe 2–2.5 cm. long; sometimes longer in *N. subpectinata.*
  Pileus ochraceous with subfulvous disk. 59. *N. xuchilensis.*
  Pileus isabelline with testaceous disk. 60. *N. spinulifer.*
  Pileus fulvous. 61. *N. subpectinata.*
Stipe 3–4 cm. long. 62. *N. Earlei.*
Stipe 4–8 cm. long. 23. *N. semiorbicularis.*

Pileus some shade of umbrinous or brown, glabrous, about 1–2 cm. broad.
Stipe 1–2 mm. thick.
  Pileus umbonate, striate. 63. *N. montana.*
  Pileus neither umbonate nor striate. 64. *N. Sacchari.*
Stipe 3 mm. thick. 65. *N. Underwoodii.*

1. **Naucoria centuncula** (Fries) Gill. Champ. Fr. 545. 1876.

Agaricus centunculus Fries, Syst. Myc. **1**: 262. 1821.

Pileus subfleshy, convex-plane, obtuse, 16–22 mm. broad; surface lurid-yellowish-green to expallent, subsilky, the margin yellow-pulverulent; lamellae seceding, broad, thick, yellow-floccose on the edges, cinereo-flavid; spores ochraceous; stipe often curved and subeccentric, fistulose, white-pulverulent at the apex, white-villose at the base, 2.5 cm. long, 2.5 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: On dead wood.
DISTRIBUTION: Michigan and Nebraska; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 601a* (*495*).

2. **Naucoria lenticeps** (Peck) Sacc. Syll. Fung. **5**: 838. 1887.

Agaricus lenticeps Peck, Ann. Rep. N. Y. State Mus. **31**: 34. 1879.

Pileus thin, convex or nearly plane, 1.2–2 cm. broad; surface dingy-ocher or subolivaceous, brown or blackish-brown on the disk; lamellae plane, subdistant, adnate, with a decurrent tooth, whitish or pallid; spores large, variable in size, 12.5–18 × 7.5–10 μ; stipe slender, hollow, paler and slightly squamulose at the apex, 2.5–3.5 cm. long, scarcely 2 mm. thick.

TYPE LOCALITY: Center, New York.
HABITAT: In sandy soil along railroads.
DISTRIBUTION: Known only from the type locality.

3. **Naucoria elatior** (Peck) Sacc. Syll. Fung. **9**: 109. 1891.

Agaricus elatior Peck, Ann. Rep. N. Y. State Mus. **39**: 41. 1887.

Pileus thin, at first conic or subcampanulate, becoming convex or nearly plane, 1–2 cm. broad; surface glabrous, slightly viscid and striatulate on the margin when moist, livid or grayish-brown; lamellae broad, ventricose, distant, whitish or livid, becoming dark-ferruginous, white on the edges; spores brownish-ferruginous, oblong-ellipsoid, 17–20 × 7.5–10 μ; stipe elongate, slender, hollow, flexuous, slightly fibrillose, pallid, 7.5–12.5 cm. long, about 2 mm. thick.

TYPE LOCALITY: Karner, New York.
HABITAT: In sphagnum.
DISTRIBUTION: Known only from the type locality.

4. **Naucoria arenaria** Peck, Bull. N. Y. State Mus. 157: 29. 1912.

Pileus thin, convex or nearly plane, 0.75–2 cm. broad; surface glabrous, pale-yellow or reddish-yellow with a paler margin; lamellae broad, distant, unequal, sinuate, brownish-ferruginous; spores brownish-ferruginous, 15–20 × 10–12 μ; stipe slender, rigid, glabrous, stuffed with a white pith, concolorous, pseudobulbous, 2–3 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Karner, New York.
HABITAT: In sandy soil.
DISTRIBUTION: Known only from the type locality.

5. **Naucoria curvomarginata** (Peck) Sacc. Syll. Fung. **5**: 842. 1887.

Agaricus curvomarginatus Peck, Ann. Rep. N. Y. State Cab. **23**: 92. 1872.

Pileus thin, convex, 8–12 mm. broad; surface smooth, reddish-yellow, margin paler, reflexed, extending beyond the lamellae; lamellae subventricose, emarginate, decurrent-toothed,

pale-yellow or whitish, with a flesh-colored tint; stipe equal, solid, wavy, with a whitish, silky luster, 2.5–7.5 cm. long.

TYPE LOCALITY: North Elba, New York.
HABITAT: In mossy places in woods.
DISTRIBUTION: New York.
ILLUSTRATIONS: Ann. Rep. N. Y. State Cab. **23**: *pl. 2, f. 1–5.*

6. **Naucoria Christinae** (Fries) Sacc. Syll. Fung. 5: 829. 1887.

Agaricus Christinae Fries, Epicr. Myc. 192. 1838.

Pileus fleshy, thin, acutely conic when young, very broadly conic with a sharp umbo when mature, gregarious, becoming black throughout on drying, 2–3 cm. broad; surface somewhat hygrophanous, viscid, smooth, but under a lens marked with fine, close, radiating lines, variable in color, blood-red, cinnamon, and rusty-red, margin somewhat repand as if lobed, becoming revolute with age, faintly striate when moist; context thin, concolorous; lamellae free or slightly adnexed, receding, crowded, pallid, becoming bright-saffron-yellow, somewhat spotted; spores pip-shaped, pale-yellow, 10–12 × 5 μ; stipe cylindric, radicate, glabrous, fistulose, cartilaginous, very tough, 6–10 cm. long, 3–6 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: On the ground in woods.
DISTRIBUTION: New England; also in Europe.
ILLUSTRATION: Fries, Ic. Hymen. *pl. 121, f. 1.*

7. **Naucoria triscopoda** (Fries) Sacc. Syll. Fung. 5: 841. 1887.

Agaricus triscopus Fries, Monog. Hymen. Suec. 1: 375. 1857.

Pileus subfleshy, conic-hemispheric, obtuse, becoming convex-plane, umbonate, 4–10 mm. broad; surface glabrous, bay, becoming ochraceous on drying; lamellae adnate, subcrowded, thin, plane, dark-ferruginous; spores dark-ferruginous, 6–8 × 3–4 μ; stipe filiform, curved or bent, equal, glabrous, opaque, hollow, stuffed to slightly fistulose, ferruginous, umbrinous at the base, 2.5 cm. long.

TYPE LOCALITY: Sweden.
HABITAT: On dead deciduous wood.
DISTRIBUTION: New York and Michigan; also in Europe.
ILLUSTRATION: Fries, Ic. Hymen. *pl. 124, f. 3.*

8. **Naucoria lateritia** Murrill, sp. nov.

Pileus conic to campanulate, not fully expanding, with a prominent umbo, gregarious, 1–1.5 cm. broad; surface hygrophanous, striate when fresh, glabrous, latericious, fading in herbarium specimens, margin entire, concolorous; lamellae sinuate, ventricose, subdistant, entire and concolorous on the edges; spores ellipsoid, smooth, pale-yellow under the microscope, 7 × 3–4 μ; stipe subequal, rather slender, cartilaginous, smooth, glabrous, bay, 3 cm. long, 1.5 mm. thick.

Type collected on dead wood by the roadside in woods at Lake Placid, Adirondack Mountains, New York, October 3–14, 1912, *W. A. & Edna L. Murrill 559* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

9. **Naucoria discomorbida** (Peck) Sacc. Syll. Fung. 5: 842. 1887.

Agaricus discomorbidus Peck, Ann. Rep. N. Y. State Mus. **26**: 58. 1874.

Pileus thin, convex or expanded, 2.5–4 cm. broad; surface glabrous, subviscid, reddish-brown or dull-chestnut; context white; lamellae crowded, narrow, white or pallid to brownish, serrulate on the edges; spores nucleate, 10 × 6 μ; stipe equal, white, stuffed, glabrous, subpruinose at the apex, 5–8 cm. long, 2–5 mm. thick.

TYPE LOCALITY: Croghan, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: Eastern Canada, northern New York, and Connecticut.

10. **Naucoria unicolor** Peck, Ann. Rep. N. Y. State Mus. **41**: 68. 1888.

Pileus thin, broadly convex, plane or slightly depressed, 1.2–2 cm. broad; surface glabrous, hygrophanous, yellowish-brown when moist, paler when dry, margin striatulate when moist;

lamellae thin, crowded, slightly rounded behind, concolorous; spores broadly ellipsoid, brownish-ferruginous, 6–7.5 × 5 μ; stipe equal, tough, hollow, glabrous, concolorous, with white mycelium at the base, 2.5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Selkirk, New York.
HABITAT: On decayed wood and old stumps of deciduous trees.
DISTRIBUTION: New York.

11. **Naucoria pascuensis** Murrill, sp. nov.

Pileus convex, 8–10 mm. broad; surface ochraceous, viscid, margin not striate; lamellae adnexed, subdistant, broad, ventricose, dark-fuscous; spores broadly ellipsoid, 10–12 × 8–10 μ; stipe cylindric, subglabrous but with scattered fibrils, subconcolorous, hollow, 3–4 cm. long, 1 mm. thick.

Type collected in an upland Bermuda grass pasture, red clay land, at Auburn, Alabama, October 14, 1900, *F. S. Earle* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: South Carolina to Alabama.
EXSICCATI: Rav. Fungi Am. *102* (as *A. subglobosus*).

12. **Naucoria subfulva** Murrill.

Agaricus fulvus Peck, Ann. Rep. N. Y. State Cab. **23**: 92. 1872. Not *A. fulvus* Schaeff. 1774.
Naucoria fulva Sacc. Syll. Fung. **5**: 838. 1887.

Pileus thin, convex, becoming expanded, umbonate, 8–16 mm. broad; surface tawny-yellow, darker when moist; lamellae broad, emarginate, decurrent-toothed, cinnamon-colored; stipe equal, solid, subflexuous, a little paler than the pileus, 2.5–3.5 cm. long.

TYPE LOCALITY: Bethlehem, New York.
HABITAT: On the ground in pine woods.
DISTRIBUTION: New York.

13. **Naucoria praecox** Murrill.

Agaricus vernalis Peck, Ann. Rep. N. Y. State Cab. **23**: 91. 1872. Not *A. vernalis* Bolt. 1788.
Naucoria vernalis Sacc. Syll. Fung. **5**: 838. 1887.

Pileus thin, fleshy, convex, becoming a little depressed, umbonate, 1.2–2.5 cm. broad; surface hygrophanous, dull-yellow, darker when moist, margin deflexed; lamellae narrow, attached, cinnamon-colored; stipe rather long, flexuous, striate-sulcate, hollow, tapering downward, white-villose at the base, brownish, 4–5 cm. long, 2 mm. thick.

TYPE LOCALITY: North Greenbush, New York.
HABITAT: On rotten wood.
DISTRIBUTION: Northern New York.
ILLUSTRATION: Atk. Stud. Am. Fungi ed. 1. *f. 146;* ed. 2. *f. 150.*

14. **Naucoria scorpioides** (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 431. 1879.

Agaricus scorpioides Fries, Epicr. Myc. 199. 1838.

Pileus thin, somewhat fleshy, conic-convex to expanded, becoming depressed about the umbo, 1–1.5 cm. broad; surface subtestaceous, alutaceous, or isabelline, expallent, glabrous, scarcely viscid; lamellae adnate with a decurrent tooth, pallid to darker, concolorous and entire on the edges; spores 5–6 μ long; stipe slender, flexuous, dry, pallid, hollow, white-fibrillose, pruinose at the apex, 7–12 cm. long.

TYPE LOCALITY: Europe.
HABITAT: Among mosses in woods.
DISTRIBUTION: Adirondack Mountains, New York; also in Europe.

15. **Naucoria humidicola** Murrill, sp. nov.

Pileus convex, not expanding, sometimes slightly umbonate, gregarious, 1–2 cm. broad; surface smooth, glabrous, hygrophanous, not striate, uniformly cremeous to pale-isabelline, margin entire, concolorous; lamellae adnate to sinuate, sometimes rounded behind, plane, rather distant, pale-yellowish, darker at maturity; spores ellipsoid, smooth, melleous under the microscope, 13–17 × 6–8 μ; stipe slender, equal, straight, snapping readily, concolorous

to pale-bay, usually paler at the apex, whitish-fibrillose to subglabrous, about 7 cm. long and 2 mm. thick.

Type collected in wet, mossy, open ground at Lake Placid, Adirondack Mountains, New York, October 3–14, 1912, *W. A. & Edna L. Murrill 1019* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Vicinity of Lake Placid, Adirondack Mountains, New York.

16. **Naucoria temulenta** (Fries) Gill. Champ. Fr. 547. 1876.

Agaricus temulentus Fries, Syst. Myc. 1: 268. 1821.

Pileus submembranous, somewhat fleshy on the disk, campanulate to convex, broadly subumbonate, 1–2.5 cm. broad; surface glabrous, hygrophanous, ferruginous, becoming ochraceous-alutaceous on drying, margin striatulate when moist, becoming even when dry; lamellae adnate, subdistant, narrowed in front, lurid to umbrinous-ferruginous; spores 12 × 6 μ; stipe thin, tough, flexuous, polished, glabrous, whitish or ferruginous, spongy-stuffed, pulverulent at the apex, fibrillose at the base, 7–8 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: Rich soil in woods or swamps.
DISTRIBUTION: Northern New York; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 459 (509)*; Fries, Ic. Hymen. *pl. 125, f. 2.*

17. **Naucoria siparioides** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 852. 1887.

Agaricus siparioides Berk. & Curt. Ann. Mag. Nat. Hist. III. **4**: 291. 1859.

Pileus hemispheric, 12–18 mm. broad; surface minutely and thickly squamulose-verrucose, yellowish-brown; context thin, brittle; lamellae at first attached but soon separating, plane, distant, broad, denticulate on the edges; spores subellipsoid, 6 μ long; stipe brown, fibrillose, fistulose, abruptly swollen and covered with a dull-pale-yellowish down at the base, 2.5 cm. long, less than 2 mm. thick.

TYPE LOCALITY: New England.
HABITAT: On the mud of an exsiccated swamp.
DISTRIBUTION: Known only from the type locality.

18. **Naucoria sphagnophila** Peck, Bull. N. Y. State Mus. 139: 45. 1910.

Pileus thin, convex, becoming nearly plane, gregarious, 1.2–2.5 cm. broad; surface minutely appressed-tomentose and sometimes floccose-squamulose, hygrophanous, tinged with flesh-color when young or moist, becoming buff-white on drying, grayish-ochraceous or rusty-brown when mature; lamellae thin, narrow, subsinuate, crowded, unequal, uneven on the edges, yellowish, becoming ferruginous; spores ellipsoid, 8–9 × 4–5 μ; stipe equal, flexuous, solid or at length hollow, yellowish with a slight floccose tomentum at the apex, white-tomentose at the base, 2.5–4.5 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Stow, Massachusetts.
HABITAT: In sphagnum in a swamp.
DISTRIBUTION: Vicinity of Stow, Massachusetts.

19. **Naucoria scirpicola** Peck, Ann. Rep. N. Y. State Mus. **42**: 115 (19). 1889.

Pileus membranous, at first hemispheric, becoming convex or nearly plane, 1.2–2 cm. broad; surface glabrous or adorned with a few floccose, superficial scales, tawny or subochraceous, subgranulate when dry, margin widely striate; lamellae subdistant, slightly adnexed, nearly concolorous; spores ellipsoid, 10–12.5 × 7.5 μ; stipe slender, white, flocculose toward the base, attached to the matrix by white, tomentose filaments, 1.5–2.5 cm. long, 1 mm. thick.

TYPE LOCALITY: Patchogue, New York.
HABITAT: At the base of stems of *Scirpus validus*.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **42**: *pl. 2, f. 6–10.*

20. **Naucoria Curcuma** (Berk. & Curt.) Sacc. Syll. Fung. 5: 854. 1887.

Agaricus Curcuma Berk. & Curt. Ann. Mag. Nat. Hist. II. 12: 421. 1853.

Pileus hemispheric, 2 cm. broad; surface densely covered with squamose fascicles of flocci, dark-brownish-yellow; context thin, yellow; lamellae emarginate, slightly attached, broad, ventricose, dark-ochraceous; stipe solid, brown, fibrillose, dilated at the base, 2.5–4 cm. long, 2 mm. thick; mycelium tawny.

TYPE LOCALITY: South Carolina.
HABITAT: On an old stump.
DISTRIBUTION: Known only from the type locality.

21. **Naucoria pennsylvanica** (Berk. & Curt.) Sacc. Syll. Fung. 5: 854. 1887.

Agaricus pennsylvanicus Berk. & Curt. Ann. Mag. Nat. Hist. III. 4: 291. 1859.

Pileus globose to hemispheric, subcespitose, 1–2.5 cm. broad; surface dry, hispid-squamulose, pale-fulvous, margin incurved, slightly appendiculate in early stages; lamellae squarely adnate, broad, ferruginous-fulvous; spores ellipsoid, often plane or concave on one side, smooth, deep-ferruginous, 7 × 4–5 μ; stipe curved, tapering upward, hollow, cartilaginous, paler than the pileus, with whitish tomentum, especially near the base, 2–3 cm. long, about 3 mm. thick; veil slight, arachnoid, disappearing at a very early stage.

TYPE LOCALITY: Pennsylvania.
HABITAT: On dead wood in low, shaded positions.
DISTRIBUTION: New England to North Carolina and west to Washington.
ILLUSTRATION: Mycologia 3: *pl. 40, f. 10.*

22. **Naucoria amara** Murrill, sp. nov.

Pileus convex to subexpanded, not umbonate, gregarious, 3–4 cm. broad; surface moist, glabrous, somewhat uneven, ochroleucous to isabelline, with a darker zone near the margin, which is not striate and only slightly inflexed when young; context thin, whitish, with the taste decidedly bitter at first, becoming farinaceous, and the odor farinaceous; lamellae slightly sinuate, crowded, plane, rather narrow, whitish to fulvous, very thin, entire and concolorous on the edges; spores broadly ovoid, smooth, melleous under the microscope, 10–12 × 6–7 μ; stipe irregular and variable in shape and size, smooth, glabrous, white, shining, hollow, averaging about 5 cm. long and 5 mm. thick.

Type collected on a manure pile under trees in the New York Botanical Garden, July 2, 1915, *W. A. Murrill* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

23. **Naucoria semiorbicularis** (Bull.) Quél. Champ. Jura Vosg. 100. 1872.

Agaricus semiorbicularis Bull. Champ. Fr. *pl. 422, f. 1.* 1788.
Agaricus pediades Fries, Syst. Myc. 1: 290. 1821.
Naucoria pediades Quél. Champ. Jura Vosg. 100. 1872.

Pileus hemispheric to convex or rarely plane, gregarious, 2–5 cm. broad; surface glabrous, smooth, often cracking with age, slightly viscid when wet, tawny or ferruginous to paler; lamellae adnate or adnexed, broad, crowded, ochraceous to dark-brown; spores ellipsoid, smooth, ferruginous-melleous under the microscope, brownish in mass, 10–15 × 5–9 μ; stipe slightly enlarged at the base, rather tough, stuffed, glabrous, yellowish-brown or reddish-brown, 4–8 cm. long, 2–5 mm. thick.

TYPE LOCALITY: France.
HABITAT: On lawns and in pastures and along roads and paths, often on old manure.
DISTRIBUTION: Throughout temperate and tropical North America; also in Europe.
ILLUSTRATIONS: Cooke Brit. Fung *pl. 479 (506)* (as *A. arvalis*), *pl. 492 (505)*, *493a (507)*; Gill. Champ. Fr. *pl. 371 (488)*, *372 (489)*; Mycologia 3: *pl. 40, f. 2*; Pat. Tab. Fung. *f. 346.*
EXSICCATI: Barth. Fungi Columb. *2641;* Ellis & Ev. N. Am. Fungi *2802;* Herpell, Präp. Hutpilze *84;* Krieger, Fungi Sax. *323;* Rav. Fungi Am. *2;* Roum. Fungi Gall. *1001, 3401;* Fungi Sel. *4802;* Sydow, Myc. Mar. *2503, 2724;* Thüm. Fungi Austr. *606;* Myc. Univ. *802, 802b;* Underw. & Cook, Illust. Fungi *3.*

24. **Naucoria striata** Clements & Shear; Clements, Bot. Surv. Neb. 5: 10. 1901.

Pileus carnose, convex, at length explanate or repand, gregarious, 3–6 cm. broad; surface glabrous, glutinous, ochroleucous, paler toward the margin; lamellae free, somewhat crowded, ventricose, at first pale-umber, becoming ferruginous; spores ovoid, smooth, ferruginous, 7–8 × 5 μ; stipe broad, equal or subincrassate at the base, sometimes compressed, solid or medullate with age, fibrous, beautifully lineate from the apex to the middle, silky-fibrillose or squamose, shining at the apex, pale-cremeous, fuscescent at the base, 4–7 cm. long, 13–15 mm. thick.

TYPE LOCALITY: Lincoln, Nebraska.
HABITAT: On rich ground.
DISTRIBUTION: Known only from the type locality.

25. **Naucoria paludosella** Atk. Jour. Myc. **12**: 193. 1906.

Pileus convex to expanded, somewhat depressed when old, 2.5–3 cm. broad; surface viscid when moist, clay-colored, darker at the center, often covered with darker, appressed, clay-brown scales; lamellae emarginate, adnate, sometimes with a decurrent tooth, easily becoming free, raw-umber to Mars-brown; spores subovoid to subellipsoid, smooth, fuscous-ferruginous, dull-ochraceous under a microscope, 9 × 4–5 μ; stipe cartilaginous, floccose, concolorous, but paler, at length hollow, bulbous and covered with a whitish mycelium at the base, 6–8 cm. long, 3–4 mm. thick; veil rather thick, floccose, disappearing, leaving remnants on the stipe and margin of the pileus when fresh.

TYPE LOCALITY: Buckeye Lake, Ohio.
HABITAT: On living sphagnum and other mosses and on rotten wood.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Hard, Mushr. *f. 229;* Jour. Myc. 12: *pl. 91.*

26. **Naucoria argillosa** (Berk. & Curt.) Sacc. Syll. Fung. **5**: 838. 1887.

Agaricus argillosus Berk. & Curt. Ann. Mag. Nat. Hist. II. 12: 421. 1853.

Pileus at first convex, firm, subcoriaceous when dry, 5–7.5 cm. broad, with the habit of *Gymnopus carnosus;* surface smooth, pale-brownish-yellow, margin inflexed; lamellae adnexed, much crowded, narrow, white to argillaceous; spores copious, pale-argillaceous, ellipsoid, subcymbiform, rather minute; stipe cartilaginous, radicate, attenuate below, white, hollow, 10 cm. long, 7 mm. thick.

TYPE LOCALITY: South Carolina.
HABITAT: On the ground in woods.
DISTRIBUTION: North Carolina and South Carolina.

27. **Naucoria sororia** Peck, Bull. Torrey Club **34**: 101. 1907.

Pileus fleshy, fragile, convex, broadly umbonate, solitary or gregarious, 5–10 cm. broad; surface glabrous, lacunose, subviscid, tawny, often with a slightly darker zone near the margin when moist, margin even, wavy or slightly lobed; context firm, watery, white, the taste and odor farinaceous; lamellae narrow, crowded, adnate, whitish, becoming darker with age and on drying; spores ellipsoid, 10–12 × 6–8 μ; stipe equal or slightly bulbous, flexuous, fragile, stuffed, pale-tawny, white within, striate at the apex, 4–12 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Falmouth, Massachusetts.
HABITAT: In open grassy places or on compost heaps.
DISTRIBUTION: Massachusetts and New York.

28. **Naucoria velutina** Murrill, sp. nov.

Pileus thin, submembranous, expanded, subumbonate, gregarious, 5–10 mm. broad; surface velvety-tomentose, pale-brownish, margin not striate; lamellae adnexed, subdistant, very broad, irregular, rosy-isabelline to pale-brownish, whitish and somewhat dentate on the edges,

ventricose; spores broadly fusiform, smooth, melleous under the microscope, 7–8 × 5–6 μ; stipe cylindric, concolorous, tubular, firm, pruinose-fibrillose at the apex, 3 cm. long, 1 mm. thick.

Type collected among mosses in a swamp at Redding, Connecticut, August 27, 1902, *F. S. Earle 1246* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

29. **Naucoria pruinatipes** (Peck) Sacc. Syll. Fung. 5: 842. 1887.

Agaricus pruinatipes Peck, Ann. Rep. N. Y. State Mus. 29: 39. 1878.

Pileus regular, convex, 2.5–3.5 cm. broad; surface smooth, hygrophanous, brownish when moist, ochraceous-yellow when dry; context whitish; lamellae crowded, nearly plane, rounded behind, pale-cinnamon; spores subellipsoid, brownish-ferruginous, 6 μ long; stipe equal, firm, stuffed or hollow, pruinose, striate, pallid or cinereous, 2.5–5 cm. long, about 2 mm. thick.

TYPE LOCALITY: Greig, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: New York.

30. **Naucoria pallidomarginata** (Peck) Murrill.

Agaricus pallidomarginatus Peck, Bull. Buffalo Soc. Nat. Sci. 1: 50. 1873.
Hebeloma pallidomarginatum Sacc. Syll. Fung. 5: 804. 1887.
Naucoria paludosa Peck, Ann. Rep. N. Y. State Mus. 41: 68. 1888.
Naucoria uliginosa Peck, Ann. Rep. N. Y. State Mus. 54: 149. 1900.

Pileus very thin, broadly convex or plane, 1.2–2.5 cm. broad; surface glabrous, hygrophanous, brown and striatulate on the margin when moist, buff-yellow when dry; context subconcolorous; lamellae crowded, thin, rather broad, adnexed, at first yellowish or pallid, then brownish-ochraceous, uneven or crenulate on the edges; spores ferruginous, ellipsoid, uniguttulate, 10–12 × 5–6 μ; stipe slender, firm, equal, hollow, brittle, glabrous, pallid or brownish, 2.5–5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Sandlake, New York.
HABITAT: In wet, marshy, or damp ground.
DISTRIBUTION: New York and Washington.

31. **Naucoria umbriniceps** Murrill, sp. nov.

Pileus rather thin, convex to subexpanded, slightly umbonate when young, about 1 cm. broad; surface glabrous, hygrophanous, zonate when fresh, umbrinous with an isabelline tint; lamellae sinuate, plane, broad, subdistant, fulvo-umbrinous at maturity, pallid and finely serrulate on the edges; spores ellipsoid, smooth, pale-yellow under the microscope, 7 × 3–4 μ stipe tapering upward, slender, tough, pruinose to glabrous, dull-brownish-pallid, 2 cm. long, 1.5 mm. thick.

Type collected on dead deciduous wood in woods at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 189* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

32. **Naucoria serrulata** Murrill, sp. nov.

Pileus convex to subexpanded, gregarious, 2–2.5 cm. broad; surface smooth, glabrous, hygrophanous, very uniform in color, umbrinous-fulvous, finely striate, margin entire, concolorous; context with mild taste; lamellae adnate, sometimes separating with age, rather crowded, broad, plane, umbrinous-avellaneous, gravish and minutely serrulate on the edges; spores ellipsoid, smooth, pale-yellowish under the microscope, 8–9 × 5–6 μ; stipe short, subequal, smooth, glabrous, pallid or somewhat umbrinous, 2–2.5 cm. long, 2 mm. thick.

Type collected on a dead beech log in woods at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 13* (herb. N. Y. Bot. Gard.).

HABITAT: On dead logs in woods.
DISTRIBUTION: Vicinity of Lake Placid, Adirondack Mountains, New York.

33. **Naucoria lignicola** (Peck) Sacc. Syll. Fung. **5**: 838. 1887.

Agaricus lignicola Peck, Ann. Rep. N. Y. State Cab. **23**: 91. 1872.

Pileus thin, convex, umbonate, 1.2–2.5 cm. broad; surface smooth or slightly fibrillose, hygrophanous, watery-cinnamon when moist, dull-yellow when dry, margin striatulate when moist; lamellae narrow, crowded, attached, cinnamon-colored; stipe slender, equal, hollow, slightly fibrillose, firm, mostly curved, reddish-brown, 2.5–5 cm. long.

TYPE LOCALITY: Sandlake, New York.
HABITAT: On old logs in woods.
DISTRIBUTION: Northern New York.

34. **Naucoria firma** Peck, Ann. Rep. N. Y. State Mus. **54**: 148. 1901.

Pileus fleshy, firm, broadly convex, soon nearly plane, 1.5–2.5 cm. broad; surface hygrophanous, blackish-brown when moist, ochraceous-brown when dry, often rugulose; context white, the taste farinaceous, soon changing to bitter; lamellae thin, rather narrow, crowded, rounded behind, adnexed, minutely floccose on the edges, pallid; spores ellipsoid, brownish-ferruginous, 7.5 × 5 μ; stipe firm, equal, often flexuous or curved, stuffed or hollow, fibrillose-striate and minutely flocculose, concolorous or a little paler, 2.5–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Floodwood, New York.
HABITAT: On a decaying, prostrate trunk of sugar maple.
DISTRIBUTION: New York and Massachusetts.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **54**: *pl. H, f. 10–16.*

35. **Naucoria platysperma** Peck, Bull. Torrey Club **25**: 324. 1898.

Pileus convex, becoming nearly plane, 2.5–3.5 cm. broad; surface glabrous, slightly tinged with ochraceous or reddish-yellow when young, soon whitish, margin at first adorned with vestiges of a white, flocculent veil; context white; lamellae moderately crowded, slightly rounded behind, pallid, becoming brownish; spores broadly ellipsoid, 15 × 12.5 μ; stipe equal, stuffed with a white pith, slightly flocculent or furfuraceous above when young, whitish, the mycelium sometimes forming white, thread-like strands, 3.5–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Compton, California.
HABITAT: On the ground.
DISTRIBUTION: Southern California.

36. **Naucoria pubescens** Murrill, sp. nov.

Pileus convex, not fully expanding, 1–1.5 cm. broad; surface dry, striate, uniformly isabelline, finely whitish-pubescent, margin thin, entire, concolorous, becoming lacerate with age; lamellae adnate, subdistant, ferruginous; spores ovoid, smooth, pale-melleous under the microscope, 7 × 4–5.5 μ; stipe short, subequal, isabelline, whitish-fibrillose, cartilaginous, arising from a mat of white mycelium, about 1 cm. long, 1–2 mm. thick.

Type collected on decayed wood in woods at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 450* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

37. **Naucoria tubariiformis** Murrill, sp. nov.

Pileus small, convex-hemispheric to nearly expanded, not umbonate, gregarious, 1–1.5 cm. broad; surface smooth, glabrous, dull-yellow, margin brown, entire, not striate; context cream-colored, without characteristic taste or odor; lamellae squarely adnate, broad, slightly ventricose, subdistant, pale-brown, pallid and entire on the edges; spores ovoid, smooth, brownish-fulvous, 6–7 × 4 μ; cystidia none; stipe cylindric, subequal, cartilaginous, hollow, pale-brown to dark-brown, somewhat velvety at the apex, glabrous below, 3–4 cm. long, 1.5–2 mm. thick.

Type collected on a lawn at Stanford University, California, February 13, 1907, *A. M. Patterson 37* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

38. **Naucoria mammillata** Murrill, sp. nov.

Pileus conic to campanulate, not expanding, prominently umbonate, gregarious, 1–1.3 cm. broad; surface smooth, glabrous, dark-isabelline, stramineous on and near the umbo, the stramineous area becoming more extensive on drying, margin entire, dark-isabelline, bay and sharply inflexed in dried specimens; lamellae adnate, broad, subdistant, isabelline to fulvous, pallid and entire on the edges; spores oblong-ellipsoid, smooth, melleous under the microscope, mostly uniguttulate, 7 × 3–4 μ; stipe cylindric, equal, smooth, glabrous, cartilaginous, fulvous above, bay below, about 3.5 cm. long, 1–2 mm. thick.

Type collected on fallen, much decayed wood in woods at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 694* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

39. **Naucoria caespitosa** Murrill, sp. nov.

Pileus rather thin, convex to plane, slightly umbonate at times, cespitose or gregarious, about 2 cm. broad; surface subviscid, smooth, glabrous, uniformly cream-colored or pale-isabelline, margin entire, not striate, involute when young, decorated with the remains of a slight, evanescent, fibrillose veil; lamellae adnexed or sinuate, narrow, crowded, yellowish to dark-melleous, entire and concolorous on the edges; spores ellipsoid, smooth, melleous under the microscope, 1–2-guttulate, 7–8.5 × 6 μ; stipe short, cylindric, equal, cartilaginous, cream-colored, slightly darker at the base, fibrillose from the remains of the veil, 1–1.5 cm. long, about 2 mm. thick.

Type collected on a dead, coniferous, moss-covered log in woods near Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 691* (herb. N. Y. Bot. Gard.).

HABITAT: On coniferous logs.

DISTRIBUTION: Vicinity of Seattle, Washington.

40. **Naucoria brunneimarginata** Murrill, sp. nov.

Pileus thin, campanulate to subexpanded, gibbous, scattered, 1.5–2.5 cm. broad; surface smooth, glabrous, pale-yellowish-gray or dark-cream-colored, margin entire, not striate, incurved when young, marked with a brownish zone; context cream-colored, without characteristic taste or odor; lamellae sinuate, narrow, rather distant, yellowish, soon colored by the spores, entire and concolorous on the edges; spores ovoid, smooth, melleous under the microscope, 8–9 × 5–6 μ; stipe cylindric, equal, slender, smooth, glabrous, cartilaginous, hollow, cream-colored, 3–5 cm. long, 1–2 mm. thick.

Type collected among leaves and grass in rich soil under trees at Madera Creek, Stanford University, California, December 21, 1902, *James McMurphy 52* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Vicinity of Stanford University, California.

41. **Naucoria Harperi** Murrill, sp. nov.

Pileus convex to plane, thin, gregarious, 2–2.5 cm. broad; surface hygrophanous, glabrous, uniformly leather-colored, margin entire, concolorous, striate, not projecting and not inflexed on drying; lamellae adnate, distant, ventricose, not very broad, ferruginous, entire and concolorous on the edges; spores ellipsoid, smooth, apiculate, pale-melleous under the microscope, 7–8 × 4–5 μ; stipe rather slender, equal or tapering upward, concolorous, glabrous above, whitish-floccose below, 3–4 cm. long, 2–3 mm. thick.

Type collected on a lawn at Berkeley, California, March 8, 1911, *R. A. Harper 64* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

42. **Naucoria Pattersonae** Murrill, sp. nov.

Pileus convex to expanded, not umbonate, solitary, 3–3.5 cm. broad; surface smooth, glabrous, creamy-white to dull-yellow, margin entire, concolorous, not striate; context cream-colored, with nutty taste and odor; lamellae slightly sinuate, broad, somewhat ventricose, subdistant, cream-colored, whitish and serrulate on the edges; spores oblong-ellipsoid, slightly curved at times, smooth, pale-yellow under the microscope, 7–8 × 4–5 μ; stipe cylindric,

equal, rather short and thick, tough, hollow, smooth, glabrous, clay-colored above, darker below, marked with a slight annular trace at the middle, 3–3.5 cm. long, 3–5 mm. thick.

Type collected in grassy soil near cypress trees at Stanford University, California, February 14, 1907, *A. M. Patterson 41* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

43. **Naucoria washingtonensis** Murrill, sp. nov.

Pileus convex to plane, not umbonate, sometimes slightly depressed, cespitose or gregarious, 2–3 cm. broad; surface dry or moist, minutely tomentose to subglabrous, uniformly isabelline, margin entire to somewhat irregular or eroded, concolorous, not striate; lamellae adnate or somewhat sinuate, plane, narrow, crowded, dirty-isabelline, pallid and slightly serrulate on the edges; spores ellipsoid, tapering at both ends, finely asperulate, melleous under the microscope, 8.5–10.5 × 7 μ; stipe cylindric, equal, very straight, smooth, glabrous, isabelline, darker below, cartilaginous, hollow, 6–8 cm. long, 2–3 mm. thick.

Type collected in humus in a peat bog at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 235* (herb. N. Y. Bot. Gard.).

HABITAT: On the ground in low woods, rarely in peat bogs.

DISTRIBUTION: Very common in the vicinity of Seattle, Washington.

44. **Naucoria californica** Murrill, sp. nov.

Pileus thin, convex to plane or slightly depressed, not at all umbonate, cespitose, 2.5 cm. broad; surface smooth, glabrous, hygrophanous, uniformly fulvous, fading to pale-isabelline in dried specimens, margin entire, concolorous, not striate; lamellae squarely adnate, many times inserted, plane, rather narrow, crowded, becoming brownish-fulvous at maturity, whitish-pubescent on the edges; spores ellipsoid, smooth, melleous under the microscope, mostly uniguttulate, 7 × 3–4 μ; stipe cylindric, equal, smooth, glabrous, concolorous, stuffed, 1.5–2 cm. long, 2–2.5 mm. thick.

Type collected on chips in a grove in Golden Gate Park, San Francisco, California, November 21, 1911, *W. A. Murrill 1103* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

45. **Naucoria radicata** Murrill, sp. nov.

Pileus rather thin, irregular, campanulate to subexpanded, with a prominent, rounded umbo, solitary, 4 cm. broad; surface smooth, glabrous, hygrophanous, uniformly fulvous, margin concolorous, incurved, not striate; lamellae sinuate-adnexed, irregular, crowded, rather narrow, whitish or pale-isabelline, becoming ferruginous in dried specimens, concolorous and dentate on the edges; spores ellipsoid, smooth, pale-yellow under the microscope, 6–7 × 3–4 μ; stipe fusiform, smooth, glabrous, pale-latericious, blackening when bruised, long-radicate, 9 cm. long, 2–3 mm. thick.

Type collected on the ground in coniferous woods at Glen Brook, Oregon, November 7, 1911, *W. A. Murrill 775* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

46. **Naucoria sphagnorum** Murrill, sp. nov.

Pileus conic to campanulate, umbonate, gregarious, 2–2.5 cm. broad; surface moist, smooth, glabrous, striate, bay, paler on the margin; lamellae adnexed, rather crowded, fulvous-isabelline, entire and concolorous on the edges; spores oblong-ellipsoid, smooth, melleous under the microscope, 8–9 × 5–6 μ; stipe equal, fibrillose, latericious, cartilaginous, 6 cm. long, 3 mm. thick.

Type collected in sphagnum in a peat bog at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 482* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

47. **Naucoria vinicolor** Peck, Bull. Torrey Club **36**: 334. 1909.

Pileus broadly convex or centrally depressed, 2–3 cm. broad; surface glabrous, dry, wine-colored; context reddish; lamellae subdistant, broad, adnexed, wine-colored; spores ellipsoid,

obtuse at each end, smooth, 7–8 × 4–5 μ; stipe equal, hollow, fibrillose, subbulbous, concolorous, often covered with a white tomentum at the base, 3–5 cm. long, 3–4 mm. thick.

TYPE LOCALITY: Claremont, California.
HABITAT: Growing from decaying wood or other vegetable matter in open ground.
DISTRIBUTION: Known only from the type locality.

48. **Naucoria badia** Murrill, sp. nov.

Pileus firm, drying easily, convex to slightly depressed, gregarious, 2 cm. broad; surface dry, uniformly bay, densely and conspicuously hispid-squamulose, margin concolorous, radiate-rugose and plicate; lamellae adnate, broad, subdistant, plane, fulvous, pubescent to serrulate on the edges; spores broadly ovoid, smooth, pale-melleous under the microscope, usually uniguttulate, 7–9 × 6–7 μ; stipe short, tough, subequal, clothed and colored like the pileus, 1 cm. long, 2–3 mm. thick.

Type collected on dead alder in woods at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 586* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

49. **Naucoria tepeitensis** Murrill, Mycologia **4**: 79. 1912.

Pileus very thin, convex, gregarious, reaching 12 mm. broad; surface smooth, whitish, hygrophanous, faintly striate over the lamellae, margin entire, inrolled when young; lamellae free to adnate, whitish, dull, several times inserted, broad, distant, the edges white and slightly crenulate; spores subovoid, slightly flattened on one side, smooth, uninucleate, very pale melleous under the microscope, 6 × 4 μ; stipe crooked, arising from a mat of white mycelium, slightly enlarged above, smooth, glabrous, whitish, hygrophanous, 1 cm. long, about 1 mm. thick.

TYPE LOCALITY: Tepeite Valley, near Cuernavaca, Morelos, Mexico.
HABITAT: On a rotten log in a moist, virgin forest.
DISTRIBUTION: Known only from the type locality.

50. **Naucoria jalapensis** Murrill, Mycologia **4**: 77. 1912.

Pileus thin, conic to convex, umbonate, 2.5 cm. broad; surface pearly-white, slightly yellowish on the umbo, glabrous, dry, striate, margin at first inflexed; lamellae sinuate-adnexed, broad, rather distant, plane, white to ferruginous, with a purplish tint; spores ovoid or ellipsoid, drawn to a point at one side of the base, smooth, pale-yellow under the microscope, 7 × 4 μ; stipe equal, cylindric, curved, milky-white, glabrous, 5 cm. long, 2 mm. thick; veil fibrillose, clinging to the young margin, soon evanescent.

TYPE LOCALITY: Jalapa, Vera Cruz, Mexico.
HABITAT: On dead wood in a moist, virgin forest.
DISTRIBUTION: Known only from the type locality.

51. **Naucoria papularis** (Fries) Sacc. Syll. Fung. **5**: 856. 1887.

Agaricus papularis Fries, Nova Acta Soc. Sci. Upsal. III. 1: 225. 1851.

Pileus plane, very obtuse, fleshy, gregarious or cespitose, 2.5–5 cm. broad; surface white, rough, with innate, stalked, concolorous papules, margin thin, striatulate; lamellae adnate with a decurrent tooth, plane, broad, distant, pallid to cinnamon; stipe equal, fibrillose, pallid, hollow, tough, 4–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Island of St. Thomas.
DISTRIBUTION: Known only from the type locality.

52. **Naucoria subolivacea** Murrill, sp. nov.

Pileus smooth, thin, convex to plane, not umbonate, solitary, 1 cm. broad; surface smooth, appearing hygrophanous and glabrous but finely pubescent under a lens, not striate, uniformly dull-olivaceous, margin entire, concolorous; lamellae adnate, several times inserted, narrow, crowded, slightly ventricose, pale-melleous, serrulate and pallid on the edges; spores broadly ovoid, smooth, very pale melleous under the microscope, 6–7 × 4–5 μ; stipe cylindric, equal, hygrophanous, pale-melleous, finely pulverulent, 1 cm. long, 1.5 mm. thick.

Type collected on rotten wood on the ground in the Tepeite Valley, near Cuernavaca, Mexico, December 28, 1909, *W. A. & Edna L. Murrill 472* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

53. **Naucoria pellucida** Murrill, Mycologia 4: 78. 1912.

Pileus thin, conic to plane, umbonate, 7 mm. broad; surface bay to latericeous on the umbo, testaceous and striate between the umbo and the margin, dotted over the surface with translucent, gelatinous, pearly-white droplets or specks; lamellae adnexed, ventricose, distant, pale-testaceous, marked with droplets like those on the surface of the pileus; spores ellipsoid, finely echinulate, fulvous, 8 × 5 μ; stipe cylindric, equal, smooth, pallid above, bay below, guttate, 1 cm. long, 0.5 mm. thick.

TYPE LOCALITY: New Haven Gap, near Cinchona, Jamaica.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

54. **Naucoria oinodes** (Berk. & Curt.) Sacc. Syll. Fung. 5: 842. 1887.

Agaricus oinodes Berk. & Curt. Jour. Linn. Soc. 10: 291. 1868.

Pileus hemispheric, umbonate, gregarious, 6–8 mm. broad; surface glabrous, vinosous, striate; lamellae adnate, distant, ferruginous-reddish; spores ferruginous; stipe short, brownish, 12 mm. long.

TYPE LOCALITY: Cuba.
HABITAT: On rotten wood.
DISTRIBUTION: Known only from the type locality.

55. **Naucoria hepaticicola** Murrill, Mycologia 4: 78. 1912.

Pileus hemispheric to convex, gregarious, 1 cm. broad; surface dry, glabrous, smooth, not striate, fulvous; lamellae adnate, plane or slightly arcuate, broad, distant, inserted, melleous to fulvous; spores ovoid, somewhat irregular in outline, pointed at one end, smooth, uninucleate, melleous, 7–9 × 4–5 μ; stipe curved, tapering upward, glabrous, smooth, cartilaginous, 1.5 cm. long, 2 mm. thick above; veil very slight, fibrillose, evanescent.

TYPE LOCALITY: Jalapa, Vera Cruz, Mexico.
HABITAT: On and among liverworts on a clay bank.
DISTRIBUTION: Known only from the type locality.

56. **Naucoria cyathicola** Murrill, Mycologia 4: 77. 1912.

Pileus hemispheric-umbonate to convex, 7–12 mm. broad; surface isabelline, pale-fulvous on the umbo, innate-fibrillose, margin entire, not striate; lamellae distant, squarely adnate, whitish to pale-ochraceous; spores oblong-ellipsoid, smooth, very pale yellowish under the microscope, 6 × 3.5 μ; stipe subequal, cylindric, fibrillose, isabelline, cartilaginous, 2 cm. long, 1.5 mm. thick; veil not evident, except in fibrils on stipe and pileus.

TYPE LOCALITY: Morce's Gap, near Cinchona, Jamaica.
HABITAT: On dead trunks of tree-ferns.
DISTRIBUTION: Known only from the type locality.

57. **Naucoria corticola** Murrill, Mycologia 4: 77. 1912.

Pileus thin, convex to subexpanded, gregarious, 1–1.5 cm. broad; surface avellaneous-isabelline, innate-fibrillose with slight tufts, resembling *Panus stypticus*, margin undulate, incurved when young; lamellae adnate, dull-whitish to bay-fulvous, broad, heterophyllous, rather distant; spores ellipsoid, smooth, ferruginous, 8–9 × 4–5 μ; stipe cylindric, equal, yellow, glabrous at the apex, whitish-pubescent below, 1 cm. long, 1 mm. thick.

TYPE LOCALITY: Cinchona, Jamaica.
HABITAT: On the bark of a dead stump.
DISTRIBUTION: Known only from the type locality.

58. **Naucoria mexicana** Murrill, sp. nov.

Pileus thin, fragile, conic to convex, not fully expanding, gregarious, 1 cm. broad; surface dry, densely granular and chaffy, uniformly fulvous, margin entire, concolorous; lamellae adnate, broad, ventricose, distant, pallid to fulvous, entire and concolorous on the edges;

spores subovoid, flattened on one side, rounded at the ends, smooth, dark-melleous under the microscope, uniguttulate, 7–8 × 4–5 μ; stipe subequal, slender, tough, fulvous, hispid-tomentose, 1–2 cm. long, 1–2 mm. thick.

Type collected on much decayed wood at Xuchiles, near Cordoba, Mexico, January 17, 1910, *W. A. & Edna L. Murrill 1140* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Vicinity of Cordoba and Orizaba, Vera Cruz, Mexico.

59. **Naucoria xuchilensis** Murrill, Mycologia 4: 80. 1912.

Pileus convex to plane, slightly depressed, solitary, 3.5 cm. broad; surface ochraceous, slightly fulvous at the center, subglabrous, even; lamellae adnate, broad, distant, inserted, fulvous; spores ovoid, smooth, uninucleate, ochroleucous, 7–9 × 4–5 μ; stipe cylindric, equal, glabrous, cremeous, 2 cm. long, 3 mm. thick.

TYPE LOCALITY: Xuchiles, near Cordoba, Vera Cruz, Mexico.
HABITAT: In rich, low ground under coffee trees.
DISTRIBUTION: Known only from the type locality.

60. **Naucoria spinulifer** Murrill, Mycologia 4: 79. 1912.

Pileus hemispheric-umbonate with revolute margin, 2 cm. broad; surface innate-fibrillose, smooth, isabelline, testaceous on the umbo, cremeous at the margin; lamellae adnate, arcuate, of medium breadth and distance, dull-purplish-isabelline; spores ellipsoid, smooth, ferruginous, 5–7 × 3.5–4 μ; cystidia hyaline, flask-shaped, with short slender stalk and long cylindric neck, 10–15 μ thick, 30–50 μ long, including the stalk; stipe curved, cylindric, equal, subglabrous, stramineous above, fulvous below, 2.5 cm. long, 2.5 mm. thick.

TYPE LOCALITY: Morce's Gap, near Cinchona, Jamaica.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

61. **Naucoria subpectinata** Murrill.

Agaricus pectinatus Berk. & Curt. Jour. Linn. Soc. **10**: 291. 1868. Not *A. pectinatus* Schw. 1822.
Naucoria pectinata Sacc. Syll. Fung. **5**: 856. 1887.

Pileus thin, convex to plane or depressed, cespitose, 2.5–4 cm. broad; surface glabrous, hygrophanous, fulvous, margin deeply striate; lamellae adnexed or adnate, narrow, subdistant, concolorous; spores ovoid or ellipsoid, ferruginous, 6–7 × 3–4 μ; stipe glabrous, brown or reddish-brown, solid, 2.5–6 cm. long, 2–5 mm. thick.

TYPE LOCALITY: Cuba.
HABITAT: On logs.
DISTRIBUTION: Cuba and Jamaica.

62. **Naucoria Earlei** Murrill, Mycologia 4: 77. 1912.

Pileus thin, convex to expanded or depressed, 2–3 cm. broad; surface glabrous, pallid or alutaceous, margin even or slightly striate; lamellae slightly adnexed, subdistant, rather narrow but ventricose, pallid to fuscous; spores ellipsoid, smooth, fuscous, 10–12 × 6–8 μ; stipe cylindric, solid, firm, glabrous, pallid to brownish, darker than the pileus, 3–4 cm. long, 2 mm. thick.

TYPE LOCALITY: Castleton Gardens, Jamaica.
HABITAT: On damp, bare ground.
DISTRIBUTION: Known only from the type locality.

63. **Naucoria montana** Murrill, Mycologia 4: 78. 1912.

Pileus hemispheric-umbonate, gregarious, 1–2 cm. broad; surface glabrous, striate, light-brown, dark-brown on the umbo; lamellae adnate, broad, of medium distance, heterophyllous; spores pip-shaped, pointed at one or both ends, minutely echinulate, ferruginous, 9–11 × 4–5 μ; stipe crooked, slender, cylindric, equal, glabrous, brown above, fuliginous below, 3–4 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Cinchona, Jamaica.
HABITAT: On dead wood.
DISTRIBUTION: Jamaica.

64. **Naucoria Sacchari** Murrill, Mycologia 4: 79. 1912.

Pileus thin, subfleshy, convex to expanded, obtuse, 1–1.5 cm. broad; surface moist, subviscid, not striate, slightly floccose-scaly to glabrous, pale-fuscous, shading to nearly white on the margin; lamellae adnate, distant, nearly plane, rather broad, pale-fuscous; spores smooth, ellipsoid, ferruginous, 10–12 × 7–8 μ; stipe cylindric, hollow, floccose, concolorous, 3–4 cm. long, 1 mm. thick.

TYPE LOCALITY: Hope Gardens, near Kingston, Jamaica.
HABITAT: On rotting sugar-cane trash.
DISTRIBUTION: Known only from the type locality.

65. **Naucoria Underwoodii** Murrill, Mycologia 4: 80. 1912.

Pileus thin, rather fleshy, convex to expanded, scattered, 2 cm. broad; surface glabrous, hygrophanous, brownish, ochraceous when dry, the disk darker; lamellae adnexed, subcrowded, rather broad, subventricose, dull-fulvous; spores broadly ellipsoid, smooth, 8–9 × 6–7 μ; stipe crooked, slightly larger below, concolorous, hollow, subfibrillose, the apex floccose-fibrillose, 3 cm. long, 3 mm. thick.

TYPE LOCALITY: El Yunque, Cuba.
HABITAT: On rotten wood.
DISTRIBUTION: Known only from the type locality.

DOUBTFUL AND EXCLUDED SPECIES

Naucoria arenicola (Berk.) Sacc. Syll. Fung. **5**: 845. 1887. (*Agaricus arenicola* Berk. Lond. Jour. Bot. **2**: 511. 1843.) Reported by Fries from Oersted's collections in Costa Rica, but very probably different from the South African species. Oersted's figures are unsatisfactory and no specimens are to be found.

Naucoria Bellotiana (Berk.) Sacc. Syll. Fung. **5**: 858. 1887. (*Agaricus Bellotianus* Berk. Jour. Linn. Soc. **17**: 14. 1880.) Described from Bellot Island, Greenland, as convex, with granular, pulverulent stipe, argillaceous lamellae, and large, oblique spores, 12–13 μ long. No measurements nor colors of the hymenophore are given and the description is otherwise inadequate. The species is said to be very near *Agaricus arvalis*.

Naucoria carpophila (Fries) Quél. Champ. Jura Vosg. 102. 1872. (*Agaricus carpophilus* Fries, Obs. Myc. **1**: 45. 1815.) There are three collections at Albany bearing this name, all of them different.

Naucoria cerodes (Fries) Quél. Champ. Jura Vosg. 233. 1872. (*Agaricus cerodes* Fries, Epicr. Myc. 195. 1838.) Incorrectly reported from the Carolinas and Santo Domingo.

Naucoria conspersa (Pers.) Quél. Champ. Jura Vosg. 101. 1872. (*Agaricus conspersus* Pers. Ic. Descr. Fung. 50. 1800.) Reported from North Carolina by Schweinitz.

Naucoria coprinoceps (Berk. & Curt.) Sacc. Syll. Fung. **5**: 838. 1887. (*Agaricus coprinoceps* Berk. & Curt. Jour. Linn. Soc. **10**: 290. 1868.) Collected by Wright in Cuba. The spores are too dark for *Naucoria*.

Naucoria erinacea (Fries) Gill. Champ. Fr. 543. 1876. (*Agaricus erinaceus* Fries, Elench. Fung. **1**: 33. 1828.) Reported from Maine, Minnesota, and elsewhere. Two collections by Murrill in central Maine resemble Cooke's figure and Bresadola's specimens, but the spores are only 7–8 × 3–4 μ, much too small for the true *N. erinacea*.

Naucoria euthugramma (Berk. & Curt.) Sacc. Syll. Fung. **5**: 835. 1887. (*Agaricus euthugrammus* Berk. & Curt. Jour. Linn. Soc. **10**: 290. 1868.) Described from Wright's collections on rotten wood in Cuba. The spores prove to be purplish-brown.

Naucoria melinoides (Fries) Quél. Champ. Jura Vosg. 99. 1872. (*Agaricus melinoides* Fries, Syst. Myc. **1**: 266. 1821.) Incorrectly reported from Maryland and Wisconsin by the older mycologists, who probably confused it with *Galerula Hypni*.

Naucoria myosotis (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 430. 1879. (*Agaricus myosotis* Fries, Obs. Myc. **2**: 34. 1818.) Reported from New York and Massachusetts, but the specimens I have seen did not correspond to Fries' description, and the spores were only 8–9 × 5–6 μ instead of 16–18 × 6–9 μ.

Naucoria Nicotiana (Berk. & Curt.) Sacc. Syll. Fung. **5**: 853. 1887. (*Agaricus Nicotianus*

Berk. & Curt. Proc. Am. Acad. **4**: 116. 1858.) Described from specimens collected on damp hillsides, Bering Strait. Type not seen and description inadequate.

Naucoria pusiola (Fries) Gill. Champ. Fr. 546. 1876. (*Agaricus pusiolus* Fries, Syst. Myc. **1**: 264. 1821.) Incorrectly reported from South Carolina by Ravenel.

Naucoria pygmaea (Bull.) Gill. Champ. Fr. 544. 1876. (*Agaricus pygmaeus* Bull. Herb. Fr. *pl. 525, f. 2*; hyponym. 1791; DC. Fl. Fr. **2**: 166. 1805.) Reported from Ithaca by Atkinson on Bresadola's determination.

Naucoria reducta (Fries) Sacc. Syll. Fung. **5**: 849. 1887. (*Agaricus reductus* Fries, Monogr. Hymen. Suec. 379. 1857.) Reported from Greenland by Rostrup.

Naucoria segestria (Fries) Quél. Champ. Jura Vosg. 234. 1872. (*Agaricus segestrius* Fries, Syst. Myc. **1**: 262. 1821.) Reported from New Jersey by Ellis as occurring among mosses in a swamp, whereas the species occurs in Sweden on twigs and wood.

Naucoria sideroides (Bull.) Quél. Champ. Jura Vosg. 99. 1872. (*Agaricus sideroides* Bull. Herb. Fr. *pl. 588*; hyponym. 1793; Bull. & Vent. Hist. Champ. Fr. **1**: 574. 1809.) Reported by Berkeley from Wright's Cuban collections, but evidently a wrong determination.

Naucoria siparia (Fries) Gill. Champ. Fr. 542. 1876. (*Agaricus siparius* Fries, Syst. Myc. **1**: 261. 1821.) Reported from Michigan by Kauffman, as occurring there on soil or among mosses.

Naucoria subglobosa (Alb. & Schw.) Sacc. Syll. Fung. **5**: 830. 1887. (*Agaricus subglobosus* Alb. & Schw. Consp. Fung. 169. 1805.) Reported from South Carolina by Ravenel. See *N. pascuensis*.

Naucoria tabacina (DC.) Gill. Champ. Fr. 547. 1876. (*Agaricus tabacinus* DC. Fl. Fr. **5**: 46. 1815.) Reported from Massachusetts by Davis and from Michigan by Kauffman.

Naucoria vervacti (Fries) Quél. Champ. Jura Vosg. 100. 1872. (*Agaricus vervacti* Fries, Syst. Myc. **1**: 263. 1821.) Reported from Rhode Island, Ohio, and Kansas by the older mycologists, but probably confused with *N. semiorbicularis*.

68. PLUTEOLUS (Fries) Gill. Champ. Fr. 549. 1876.

Agaricus § *Pluteolus* Fries, Hymen. Eur. 266. 1874.

Pileus fleshy, putrescent, the margin straight and appressed when young; lamellae free, rarely adnexed; spores ochraceous, ferruginous, or fulvous; stipe central, slender, tubular, cartilaginous; veil none.

Type species, *Pluteolus reticulatus* (Fries) Gill.

I. Species occurring in temperate North America, except those confined to the Pacific coast

Pileus 1–2 cm. broad.
- Pileus olivaceous, the umbo chestnut-colored. — 1. *P. callistus.*
- Pileus grayish-stramineous, fuscescent. — 2. *P. glutinosus.*

Pileus 2.5–8 cm. broad.
- Pileus white. — 3. *P. albus.*
- Pileus pale-yellow, sometimes brownish-tan-colored. — 4. *P. versicolor.*
- Pileus pinkish-gray. — 5. *P. coprophilus.*
- Pileus brownish-yellow.
  - Stipe 4–7 cm. long, 2–4 mm. thick. — 6. *P. flavellus.*
  - Stipe 7.5–10 cm. long, 2 mm. thick. — 7. *P. expansus.*
- Pileus brown or fuliginous.
  - Pileus hygrophanous; species occurring in sandy loam. — 8. *P. brunneus.*
  - Pileus viscid; species occurring on rotten logs. — 9. *P. mucidolens.*

II. Species confined to the Pacific coast

Pileus stramineous or cremeous.
- Pileus 1–2.5 cm. broad. — 10. *P. cremeus.*
- Pileus 2.5–5 cm. broad.
  - Stipe 2.5–5 cm. long. — 11. *P. californicus.*
  - Stipe 10 cm. long. — 12. *P. stramineus.*

Pileus luteous, 2–3.5 cm. broad. — 13. *P. luteus.*

Pileus dark-avellaneous, 1 cm. broad. — 14. *P. parvulus.*

III. Species confined to tropical North America

Pileus isabelline, paler on the margin. — 15. *P. jamaicensis.*

1. **Pluteolus callistus** Peck, Ann. Rep. N. Y. State Mus. **46**: 140 (60). 1893.

Agaricus callistus Peck, Bull. Buffalo Soc. Nat. Sci. **1**: 52. 1873.
Galera callista Sacc. Syll. Fung. **5**: 865. 1887.

Pileus thin, expanded, subumbonate, 1.2–2 cm. broad; surface smooth, viscid, olivaceous or ochraceous, bright-chestnut on the umbo, assuming a dull-metallic-green color on drying, margin striatulate; lamellae thin, crowded, ventricose, attached to but easily separating from the stipe, yellowish, becoming bright-ferruginous, white on the edges when dry; spores 8.7 × 5 μ; stipe equal, hollow, pruinose, yellow, 2.5–3.5 cm. long, 1 mm. thick.

TYPE LOCALITY: Croghan, New York.
HABITAT: Exsiccated water holes in swampy woods.
DISTRIBUTION: New York and Massachusetts.

2. **Pluteolus glutinosus** Clements, Bot. Surv. Neb. **5**: 10. 1901.

Pileus membranous, conic-campanulate, at length explanate and repand, umbonate, 1.5–2 cm. broad; surface glabrous, thickly covered with a tenacious mucilage, gray-stramineous, fuscescent to the margin, which is striate to the middle, at length split; lamellae free, distant, ventricose, brown; spores ovoid or ovoid-ellipsoid, smooth, amber, 13–16 × 10–12 μ; stipe graceful, hollow, shining, equal, densely fibrillose-pulverulent, pale-ochroleucous, white-striate toward the apex, 5–10 cm. long, 3 mm. thick.

TYPE LOCALITY: Otowanie Woods, Nebraska.
HABITAT: Among stercorate leaves.
DISTRIBUTION: Known only from the type locality.

3. **Pluteolus albus** (Peck) Murrill.

Galera alba Peck, Bull. Torrey Club **24**: 143. 1897.

Pileus submembranous, campanulate, very fragile, 2.5–5 cm. broad; surface moist, striate, white, splitting on the margin; lamellae narrow, crowded, white, becoming brownish-ferruginous; spores ellipsoid, 12.5–15 × 7.5–10 μ; stipe fragile, hollow, glabrous, white, 3.5–6.5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Brookings, South Dakota.
HABITAT: On rich ground in the shade of weeds.
DISTRIBUTION: Known only from the type locality.

4. **Pluteolus versicolor** (Peck) Murrill.

Galera versicolor Peck, Bull. Torrey Club **24**: 143. 1897.

Pileus thin, fragile, convex or subcampanulate, 3.5–6.5 cm. broad; surface moist or slightly viscid, glabrous, usually pale-yellow, sometimes brownish-tan-colored, margin striate; lamellae crowded, white or pale-yellow, becoming reddish-ferruginous; spores very unequal in size, 12.5–20 × 7.5–12.5 μ, usually containing one to three nuclei; stipe equal, fragile, hollow, slightly mealy or pruinose, often tomentose at the base, white, 2.5–10 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Brookings, South Dakota.
HABITAT: On manure and other decaying vegetable matter.
DISTRIBUTION: Known only from the type locality.

5. **Pluteolus coprophilus** Peck, Ann. Rep. N. Y. State Mus. **46**: 59. 1893.

Bolbitius radians Morgan, Jour. Cinc. Soc. Nat. Hist. **18**: 37. 1895.

Pileus thin, submembranous, fragile, conic or campanulate, becoming nearly plane, sometimes cespitose, 2.5–6 cm. broad; surface somewhat viscid when moist, pinkish-gray, margin finely striate; lamellae narrow, crowded, free, pale-cinnamon-colored; spores ellipsoid, dark-ferruginous, 12.5–15 × 7.5 μ; stipe long, straight or somewhat flexuous, hollow, flocculose, white, sometimes tinged with pink, 5–8 cm. long, 2–4 mm. thick.

TYPE LOCALITY: West Albany, New York.
HABITAT: In dung heaps.
DISTRIBUTION: Canada to Ohio in the eastern United States.
EXSICCATI: Ellis & Ev. N. Am. Fungi *3404*.

6. **Pluteolus flavellus** Murrill, sp. nov.

Pileus fragile, convex to expanded, not umbonate, scattered, reaching 4 cm. broad; surface glabrous, viscid when young, light-brownish-yellow, margin pallid, deeply striate, splitting with age; context thin, bright-yellow, the taste mild; lamellae adnexed, narrow, crowded, pale-lemon-yellow, fading in herbarium specimens and not showing coloration by the spores, finely serrulate on the edges; spores ellipsoid, smooth, ferruginous under the microscope, scanty, uniguttulate, 12–13 × 8–9 μ; stipe equal, hollow, smooth, pruinose-furfuraceous, lemon-yellow with a whitish bloom, 4–7 cm. long, 2–4 mm. thick.

Type collected in soil by the roadside in the New York Botanical Garden, June 13, 1900, *F. S. Earle 90* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

7. **Pluteolus expansus** Peck, Ann. Rep. N. Y. State Mus. **46**: 139 (59). 1893.

Agaricus expansus Peck, Bull. Buffalo Soc. Nat. Sci. 1: 52. 1873.
Galera expansa Sacc. Syll. Fung. 5: 870. 1887.

Pileus submembranous, expanded or centrally depressed, 2.5–5 cm. broad; surface viscid, brownish-ocher, sometimes tinged with yellow and pink hues, plicate-striate on the margin; context thin, watery-yellow, the taste mild; lamellae crowded, just free or slightly attached, ferruginous; spores 11 × 7 μ; stipe long, equal, hollow, slightly pruinose, faintly striate, yellow, 7.5–10 cm. long, 2 mm. thick.

TYPE LOCALITY: Sandlake, New York.
HABITAT: On decaying wood or on the ground.
DISTRIBUTION: New England and New York.

8. **Pluteolus brunneus** Murrill, sp. nov.

Pileus conic to fully expanded, umbonate, cespitose or gregarious, 3–5 cm. broad; surface smooth, glabrous, hygrophanous, striate, dull-brown, avellaneous on the umbo, margin entire to undulate, concolorous; lamellae adnexed, crowded, narrow, pallid to ferruginous, white and serrulate on the edges; spores ovoid, smooth, melleous under the microscope, uniguttulate, 7–8.5 × 5–6 μ; stipe slender, equal, smooth, glabrous, milk-white, about 6 cm. long and 2 mm. thick.

Type collected in sandy loam at Stockbridge, Massachusetts, September 3, 4, 1911, *W. A. Murrill & W. Gilman Thompson* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

9. **Pluteolus mucidolens** (Berk.) Earle, Torreya **3**: 125. 1903.

Agaricus mucidolens Berk. Lond. Jour. Bot. 4: 301. 1845.
? *Pluteolus Leaianus* Sacc. Syll. Fung. 11: 60. 1895.

Pileus pluteiform, lobed, 5–8 cm. broad; surface glabrous, viscid, shining, fuliginous; context having the odor of decayed cheese; lamellae free; spores broadly subcymbiform, with a small nucleus, dull-ferruginous; stipe fibrillose, clothed with brownish fibers, 5 cm. or more long.

TYPE LOCALITY: Ohio.
HABITAT: On rotten logs.
DISTRIBUTION: Known only from the type locality.

10. **Pluteolus cremeus** Murrill, sp. nov.

Pileus conic to subexpanded, truncate, scattered, 1–2.5 cm. broad; surface smooth, glabrous, uniformly cream-colored, margin entire, concolorous, not striate; context cream-colored, with farinaceous taste but without characteristic odor; lamellae free, crowded, rather broad, ventricose, fulvous at maturity, whitish and finely serrulate on the edges; spores ovoid, smooth, melleous under the microscope, 8–9 × 5–6 μ; stipe cylindric, equal, cartilaginous, hollow, smooth, glabrous, whitish, 3–5 cm. long, 1.5–3 mm. thick.

Type collected among sticks and leaves in rich soil under trees at Madera Creek, near Stanford University, California, December 21, 1902, *James McMurphy 57* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

11. **Pluteolus californicus** McClatchie, Proc. So. Calif. Acad. Sci. 1: 383. 1897.

Pileus campanulate or ovoid to expanded, 2.5–5 cm. broad and 1–3 cm. high; surface viscid when moist, cream-colored or reddish; lamellae free, crowded, thin, 2–5 mm. wide, cream-colored, white on the edges; spores ellipsoid, 12–18 × 7–9 μ; stipe fragile, subequal, hollow, villose-pulverulent or pruinose, 2.5–5 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Compton, California.
HABITAT: On dead stems and manure.
DISTRIBUTION: Compton and Wilmington, California.

12. **Pluteolus stramineus** Murrill, Mycologia 4: 246. 1912.

Pileus thin, convex, solitary, 5 cm. broad; surface glabrous, viscid, flavous and rugose at the center, pale-stramineous and closely and conspicuously striate from the central area to the margin; lamellae narrow, free or slightly adnexed, twice inserted, dull-dirty-stramineous; spores ovoid, smooth, bright-ochraceous-melleous under a microscope, 11–14 × 6–8 μ; stipe perfectly straight, cylindric, equal, fleshy, smooth, stramineous, pulverulent above, hollow, 10 cm. long, 5 mm. thick.

TYPE LOCALITY: Corvallis, Oregon.
HABITAT: In an open grassy yard after a light rain.
DISTRIBUTION: Known only from the type locality.

13. **Pluteolus luteus** Peck, Bull. Torrey Club 22: 203. 1895.

Pileus thin, very fragile, at first subovoid, then convex or subcampanulate, gregarious, 2–3.5 cm. broad; surface glabrous, viscid, yellow, margin slightly striate; lamellae numerous, crowded, free or but slightly adnexed, yellowish, becoming ferruginous; spores ellipsoid, 10–12.5 × 6–7.5 μ; stipe slender, hollow, slightly thickened toward the base, yellowish, the apex striate and sprinkled with mealy particles, 3.5–7.5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Pasadena, California.
HABITAT: Under trees on decaying manure and in grass.
DISTRIBUTION: California.

14. **Pluteolus parvulus** Murrill, Mycologia 4: 246. 1912.

Pileus convex to subplane, thin, solitary, scarcely 1 cm. broad; surface smooth, glabrous, shining, slightly viscid, dark-avellaneous, the small umbo concolorous, margin striate; lamellae free, ventricose, broad, fulvous, the edges white and minutely serrulate; spores ellipsoid, regular, smooth, bright-melleous under a microscope, 9–11 × 5 μ; stipe enlarged at the apex, pulverulent above, glabrous below, smooth, straw-colored, hollow, flaccid and collapsing, 2 cm. long, 1 mm. thick.

TYPE LOCALITY: Preston's Ravine, near Palo Alto, California.
HABITAT: In humus on the ground in woods.
DISTRIBUTION: Known only from the type locality.

15. **Pluteolus jamaicensis** Murrill, sp. nov.

Pileus broadly convex to plane, thin, not umbonate, solitary, 3–4 cm. broad; surface dry, glabrous, isabelline on the disk, fading to pale-yellowish on the margin, which is entire, not incurved on drying; context with a distinctly mealy odor; lamellae very narrow and much crowded, free or slightly adnexed, thin, pale-melleous, pallid and entire on the edges; spores ellipsoid or ovoid, smooth, pale-yellow, 9–10 × 7–8 μ; stipe long, equal, whitish, glabrous, solid or stuffed, 10 cm. long, 5 mm. thick.

Type collected on a compost heap of vegetable remains and mud by the roadside at Moore Town, Jamaica, December 16, 1908, *W. A. & Edna L. Murrill 171* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

DOUBTFUL SPECIES

Pluteolus aleuriatus (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 291. 1879. (*Agaricus aleuriatus* Fries, Obs. Myc. **1**: 49. 1815.) Reported from New York by Peck and from

Wisconsin by Bundy. Peck remarks that his *P. expansus* is probably a form of *P. aleuriatus* but the specimens I have seen do not suggest Fries' figures, which are small, with short, white stipe.

Pluteolus reticulatus (Pers.) Gill. Champ. Fr. 549. 1876. (*Agaricus reticulatus* Pers. Ic. Descr. Fung. 13. 1798.) Reported from New York by Peck rather doubtfully and from Michigan by Kauffman. The small specimens mentioned by Peck were not found at Albany.

69. MYCENA (Pers.) Roussel, Fl. Calvados ed. 2. 64. 1806.

Agaricus § *Mycena* Pers. Syn. Fung. 375. 1801.
Bolbitius Fries, Epicr. Myc. 253. 1838.

Pileus fleshy or submembranous, putrescent; lamellae free or attached, deliquescent; spores ochraceous, ferruginous, or fulvous; stipe central, slender, tubular, cartilaginous; veil none.

Type species, *Bolbitius conocephalus* (Fries) Gill.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus snow-white when young, sordid when old. — 1. *M. sordida.*
Pileus white, yellowish or tawny on the disk. — 2. *M. Glatfelteri.*
Pileus cinereous, yellowish on the disk. — 3. *M. pulchrifolia.*
Pileus pale-yellow, reddish on the disk. — 4. *M. nobilis.*
Pileus blue, green, or olivaceous, with other tints.
  Lamellae long-decurrent. — 5. *M. macrorrhiza.*
  Lamellae adnexed or adnate.
    Pileus bluish-green to bright-brown; spores flavous, 8–10 μ long. — 6. *M. gloiocyanea.*
    Pileus yellow or smoky-olive; spores ferruginous, 10–15 μ long. — 7. *M. variicolor*

II. SPECIES CONFINED TO THE PACIFIC COAST

Pileus yellow, 4–7 cm. broad. — 8. *M. flava.*

III. SPECIES CONFINED TO TROPICAL NORTH AMERICA

Pileus flavo-melleous or sulfur-yellow, fulvous on the disk.
  Stipe glabrous. — 9. *M. jalapensis*
  Stipe villose. — 10. *M. villipes.*
Pileus avellaneous, brownish on the disk.
  Pileus 12 mm. broad; stipe 6 cm. long. — 11. *M. brunneidisca.*
  Pileus 2 cm. broad; stipe 2–4 cm. long. — 12. *M. mexicana.*

1. Mycena sordida (C. G. Lloyd) Murrill.

Bolbitius sordidus C. G. Lloyd, Myc. Notes 18. 1899.

Pileus ovoid when young, explanate when mature, thin, gregarious, 3–4 cm. broad; surface pure-snow-white when young, sordid when old, glutinous, hygrophanous, margin smooth and even when young, plicate-sulcate and ragged when old; lamellae ovate, free, firm and white when young, becoming cinnamon-colored, moist and flaccid when old; spores ovoid, 9 × 6 μ; stipe pure-white, scurfy, hollow; 5 cm. long, 5 mm. thick.

TYPE LOCALITY: Cincinnati, Ohio.
HABITAT: On rotten shavings used for horse bedding.
DISTRIBUTION: Known only from the type locality.

2. Mycena Glatfelteri (Peck) Murrill.

Bolbitius Glatfelteri Peck, Bull. Torrey Club **30**: 97. 1903.

Pileus thin, conic or subcampanulate, soon expanding with the margin curving upward, sometimes umbonate, 2–3 cm. broad; surface glabrous, very viscid, white, yellowish or tawny at the center, margin widely striate; lamellae crowded, rather narrow, subventricose, free, pallid, becoming ferruginous and pulverulent; spores 12–16 × 8–10 μ; stipe equal or slightly tapering upward, hollow, slightly striate at the apex, slightly squamulose or furfuraceous when young, becoming glabrous and shining, pure-white, 5–10 cm. long, 4–5 mm. thick.

TYPE LOCALITY: Missouri.
HABITAT: On rotted manure.
DISTRIBUTION: Missouri and Illinois.

3. **Mycena pulchrifolia** (Peck) Murrill.

Coprinus pulchrifolius Peck, Ann. Rep. N. Y. State Mus. 29: 41. 1878.

Pileus membranous, conic or campanulate, solitary, 1.2–2.5 cm. broad; surface striate to the small, even, yellowish disk, cinereous, sprinkled with minute, whitish scales or granules; lamellae narrow, crowded, free, cinnamon-brown, often furnished with a few minute, hyaline, spine-like processes; spores ellipsoid, brown with a slight rosy tint, 7.5 μ long; stipe slender, fragile, hollow, white, 5–7.5 cm. long, scarcely 2 mm. thick.

TYPE LOCALITY: Greig, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: New York and Ohio.

4. **Mycena nobilis** (Peck) Murrill.

Bolbitius nobilis Peck, Ann. Rep. N. Y. State Mus. 24: 71. 1872.

Pileus thin, fleshy on the disk, ovoid, becoming campanulate, cespitose, 2.5 cm. broad; surface smooth, plicate-striate, pale-yellow, the disk tinged with red, margin at length recurved and splitting; lamellae subdistant, tapering outwardly, attached, the alternate ones more narrow, pale-yellow, darker on the edges; stipe long, equal, smooth, hollow, white, striate at the apex, 7.5–12.5 cm. long, 2 mm. thick.

TYPE LOCALITY: Greig, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. 24: *pl. 2, f. 1–4.*

5. **Mycena macrorrhiza** (Berk. & Mont.) Murrill.

Bolbitius macrorrhizus Berk. & Mont.; Mont. Syll. Crypt. 133. 1856.

Pileus convex, depressed at the center or umbonate, fleshy, 2 cm. broad; surface viscid, rough when dry, blue to rose-colored; lamellae long-decurrent, attenuate, yellow or vitelline; spores oblong, 12–13 μ long; stipe cartilaginous, rosy, stuffed, long-radicate, 10 cm. long.

TYPE LOCALITY: Columbus, Ohio.
HABITAT: On the ground.
DISTRIBUTION: Known only from the type locality.

6. **Mycena gloiocyanea** (Atk.) Murrill.

Bolbitius gloiocyaneus Atk. Ann. Myc. 6: 54. 1908.

Pileus conic, expanding to revolute, 2–5 cm. broad; surface wrinkled, exceedingly viscid in all stages, bluish-green with dark-brown center when young, varying much in dark-green and blue-green colors but bright-brown in age, margin striate when young; spores ellipsoid, smooth, ochraceous, 8–10 $\times$ 5–6 μ; stipe viscid, concolorous.

TYPE LOCALITY: Storrs, Connecticut.
HABITAT: On old sawdust, chips, or sticks.
DISTRIBUTION: Maine, Vermont, and Connecticut.

7. **Mycena variicolor** (Atk.) Murrill.

Bolbitius variicolor Atk. Stud. Am. Fungi 164. 1900.

Pileus ovoid to conic when young, becoming convex, then expanded, and finally with a broad umbo, solitary, 2–4 cm. broad; surface very viscid when young, with the pellicle easily separable, smoky-olive to fuliginous, darker when young, becoming paler as the pileus expands, but always darker on the umbo, sometimes coarsely fibrillose-reticulate, margin finely striate; context yellow, becoming bright-olive to fuliginous with age; lamellae adnate to adnexed, becoming free, rounded behind, yellow, becoming ferruginous, sometimes finely fimbriate on the edges; spores ellipsoid, smooth, ferruginous, 10–15 $\times$ 6–8 μ; stipe cylindric to terete, tapering above, hollow, clothed with numerous, small, yellow, floccose scales, sulfur-colored and ochraceous, becoming paler and even assuming a light-brown tint with age, 4–10 cm. long, 3–8 mm. thick.

TYPE LOCALITY: Ithaca, New York.
HABITAT: On freshly manured grass plots.
DISTRIBUTION: New York, New Jersey, and Virginia.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 154;* ed. 2. *f. 158.*

8. **Mycena flava** Murrill, sp. nov.

Pileus very fragile, conic to fully expanded, broadly umbonate, cespitose, 4–7 cm. broad; surface viscid, usually glabrous, bright-lemon-yellow to pale-sordid-yellow, margin entire, concolorous; context pale-lemon-yellow, without characteristic taste or odor; lamellae free, broad, crowded, ventricose, pale-brown or fulvous at maturity; spores ellipsoid, 14 × 8 μ; stipe somewhat tapering upward, white, hollow, glabrous above, fibrous-shaggy below, 6–10 cm. long, 8–12 mm. thick.

Type collected on decayed horse manure in an old pasture at Stanford University, California, November 30, 1901, *C. F. Baker 161* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Vicinity of Stanford University, California.

9. **Mycena jalapensis** Murrill, Mycologia 4: 73. 1912.

Pluteolus tropicalis Murrill, Mycologia 4: 74. 1912.
Bolbitius jalapensis Murrill, Mycologia 4: 332. 1912.

Pileus conic to expanded, thin, umbonate, gregarious, 2–5 cm. broad; surface viscid, striate, flavo-melleous, fulvous on the umbo; lamellae free, narrow, crowded, becoming ferruginous, at length deliquescent; spores ellipsoid or ovoid, smooth, flavo-luteous under a microscope, 12–14 × 6–8 μ; stipe cylindric, equal, hollow, glabrous, white or sulfureous, 6–8 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Jalapa, Vera Cruz, Mexico.
HABITAT: Among chips in woods or on rotting grass in fields.
DISTRIBUTION: Mexico, Cuba, and Grenada.

10. **Mycena villipes** (Fries) Murrill, Mycologia 4: 73. 1912.

Bolbitius villipes Fries, Nova Acta Soc. Sci. Upsal. III. 1: 28. 1851.

Pileus submembranous, convex to expanded, 4 cm. broad; surface shining, sulfur-yellow, the disk fulvous, smooth, margin sulcate, radiate-striate; lamellae yellow; stipe equal, hollow, pilose-villose, darker than the pileus, helvolous, 5 cm. long, 2 mm. thick.

TYPE LOCALITY: Naranjo, Costa Rica.
HABITAT: On manured ground.
DISTRIBUTION: Known only from the type locality.

11. **Mycena brunneidisca** Murrill, sp. nov.

Pileus small, convex to expanded and at length somewhat depressed, not umbonate, gregarious, 12 mm. broad; surface smooth, glabrous, not striate, brownish-isabelline, brown or fuliginous on the disk, margin entire, concolorous; lamellae adnexed or adnate, crowded, rather broad, ferruginous, entire and concolorous on the edges; spores ellipsoid, smooth, ferruginous, 8–9 × 5–7 μ; stipe slender, somewhat bulbous, smooth, glabrous, white, 6 cm. long, 1–2 mm. thick.

Type collected on the ground in rich soil between Port Antonio and Manchioneal, Jamaica, December 17, 1908, *W. A. Murrill 223* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

12. **Mycena mexicana** Murrill, Mycologia 4: 73. 1912.

Bolbitius mexicanus Murrill, Mycologia 4: 332. 1912.

Pileus subcespitose, conic to expanded, umbonate, about 2 cm. broad; surface striate, avellaneous, fuliginous on the umbo, subglabrous, dry; lamellae adnexed, rather broad, becoming ferruginous and at length slightly deliquescent; spores ovoid, smooth, ochroleucous under a microscope, usually uninucleate, 8–9 × 4.5–5 μ; stipe slender, white, glabrous, cylindric, equal, hollow, 3–4 cm. long, 1 mm. thick.

TYPE LOCALITY: Xuchiles, near Cordoba, Vera Cruz, Mexico.
HABITAT: On decayed wood in coffee plantations.
DISTRIBUTION: Known only from the type locality.

DOUBTFUL AND EXCLUDED SPECIES

Bolbitius conocephalus (Bull.) Gill. Champ. Fr. 595. 1878. (*Agaricus conocephalus* Bull. Herb. Fr. *pl. 563, f. 1;* hyponym. 1791; Pers. Syn. Fung. 427. 1801.) Reported from North Carolina and California, but perhaps confused with species of *Galerula*.

Bolbitius fragilis Fries, Epicr. Myc. 254. 1838. Reported from various parts of North America. The specimens I have seen represented a variety of things and had to be disregarded.

Bolbitius tener Berk. Outl. Brit. Fungol. 183. 1860. Reported from New York, Indiana, and elsewhere, but the specimens so named do not appear to be distinct from *Galerula crispa*.

Bolbitius titubans (Bull.) Fries, Epicr. Myc. 254. 1838. (*Agaricus titubans* Bull. Herb. Fr. *pl. 425, f. 1.* 1788.) Reported from various parts of the United States, but I have seen no American specimens. The spores are described as incarnate-salmon-colored, which would place the species among the PLUTEANAE.

Bolbitius vitellinus (Pers.) Fries, Epicr. Myc. 254. 1838. (*Agaricus vitellinus* Pers. Syn. Fung. 402. 1801. Not *A. vitellinus* Batsch, 1783.) Reported from North Carolina by Schweinitz.

70. PHYLLOPORUS Quél. Fl. Myc. Fr. 409. 1888.

Pileus thick, fleshy, putrescent, solitary, tomentose; lamellae concrete with the pileus, long-decurrent, anastomosing behind; spores ochraceous, much elongated; stipe central or nearly so, fleshy; veil none.

Type species, *Gomphidius rhodoxanthus* (Schw.) Sacc.

1. Phylloporus rhodoxanthus (Schw.) Bres. Fungi Trid. 2: 95. 1900.

Agaricus rhodoxanthus Schw. Schr. Nat. Ges. Leipzig 1: 83. 1822.
Paxillus flavidus Berk. Lond. Jour. Bot. 6: 315. 1847.
? *Paxillus solidus* Rav.; Berk. & Curt. Ann. Mag. Nat. Hist. II. 12: 423. 1853.
Gomphidius rhodoxanthus Sacc. Syll. Fung. 5: 1139. 1887.

Pileus thick, firm, convex to expanded, scattered, 4–10 cm. broad; surface densely velvety-tomentose, yellowish, reddish, ferruginous, or olivaceous, margin not striate; context yellow, the taste mild; lamellae simple, forking or anastomosing, long-decurrent, subdistant, of medium width, bright-yellow, at length becoming brownish-yellow; spores oblong-ellipsoid, yellow under the microscope, olivaceous in mass when fresh, 10–14 × 4–6 μ; stipe cylindric or tapering downward, yellow or reddish, solid, subtomentose above, subglabrous or glutinous-scaly below, 5–12 cm. long, 6–10 mm. thick.

TYPE LOCALITY: North Carolina.
HABITAT: On exposed banks or in open places in woods.
DISTRIBUTION: Maine to Alabama and west to Missouri; also in Europe.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 156;* ed. 2. *f. 160;* Bull. N. Y. State Mus. 131: *pl. 116, f. 8–11;* Hard, Mushr. *f. 234;* Ricken, Blätterp. Deutschl. *pl. 28, f. 1.*

71. GYMNOPILUS P. Karst. Bidr. Finl. Nat. Folk 32: 400. 1879.

Agaricus § *Flammula* Fries, Syst. Myc. 1: 250. 1821.
Flammula Quél. Champ. Jura Vosg. 97. 1872. Not *Flammula* DC. 1818.
Gymnocybe P. Karst. Bidr. Finl. Nat. Folk 32: 412. 1879.
Ryssospora Fayod, Ann. Sci. Nat. VII. 9: 361. 1889.
Visculus Earle, Bull. N. Y. Bot. Gard. 5: 437. 1909.

Pileus fleshy, putrescent, solitary or cespitose, mostly wood-loving, usually dry or moist, viscid in several species; lamellae usually adnate or short-decurrent, and bright-ferruginous at maturity; spores ochraceous, ferruginous, or fulvous; stipe central or nearly so, fleshy or fibrous, sometimes woody; veil often present in young stages, but evanescent, sometimes leaving an annular trace and rarely a small continuous annulus as in *Pholiota*.

Type species, *Flammula Liquiritae* (Pers.) Quél.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Species growing among sphagnum in swamps. — 1. *G. sphagnicola.*
Species growing on the ground.
  Pileus glabrous.
    Pileus dry or moist, not viscid.
      Stipe 1–2.5 cm. long. — 2. *G. anomalus.*
      Stipe 2.5–5 cm. long.
        Stipe 2–4 mm. thick. — 3. *G. velatus.*
        Stipe 4–6 mm. thick.
          Pileus grayish. — 4. *G. alienus.*

Pileus ferruginous. 5. *G. rigidus.*
Stipe 8 mm. thick; pileus fulvous. 6. *G. farinaceus.*
Stipe 5–7.5 cm. long.
Stipe 4–6 mm. thick. 7. *G. Hallianus.*
Stipe 6–12 mm. thick. 8. *G. edulis.*
Pileus distinctly viscid.
Pileus dingy-yellowish or rufescent. 9. *G. squalidus.*
Pileus yellowish-red, paler on the margin. 10. *G. highlandensis.*
Pileus reddish-isabelline to orange or testaceous. 11. *G. carbonarius.*
Pileus pale-yellow, tinged with reddish-tawny or brownish hues at the center. 12. *G. spumosus.*
Pileus brownish-yellow, reddish-brown at the center.
Stipe 2–4 cm. long. 13. *G. condensus.*
Stipe 5–10 cm. long.
Stipe 3–6 mm. thick. 14. *G. alabamensis.*
Stipe 6–10 mm. thick. 15. *G. graveolens.*
Pileus reddish-brown, darker on the disk. 16. *G. fibrillosipes.*
Pileus dark-rich-chestnut; context dark-yellow. 17. *G. castaneus.*
Pileus slightly viscid and somewhat fibrillose, ochraceous-yellow, brown at the center. 18. *G. brunneodiscus.*
Pileus dry or somewhat viscid, strigose-ciliate, white. 19. *G. tricholoma.*
Species growing on logs, stumps, or about the bases of trees.
Pileus 1–2.5 cm. broad.
Pileus glabrous.
Pileus dry or moist, not viscid.
Stipe isabelline. 20. *G. autumnalis.*
Stipe yellowish-red. 21. *G. geminellus.*
Stipe reddish-brown. 22. *G. bellulus.*
Pileus distinctly viscid.
Stipe 2 mm. thick. 23. *G. pusillus.*
Stipe 3–4 mm. thick. 24. *G. viscidus.*
Pileus squamulose.
Surface ferruginous. 25. *G. squamulosus.*
Surface fulvous. 26. *G. fagicola.*
Pileus 2.5–6 cm. broad.
Pileus glabrous.
Pileus dry or moist, not viscid.
Pileus yellow. 27. *G. flavidellus.*
Pileus brown or reddish-brown.
Lamellae adnate. 28. *G. praecox.*
Lamellae long-decurrent. 29. *G. unicolor.*
Pileus viscid.
Pileus bright-yellow, darker and reddish on the disk. 30. *G. piceinus.*
Pileus uniformly yellow. 31. *G. alnicola.*
Pileus fibrillose or squamulose.
Pileus dry or moist, not viscid.
Stipe 2–3.5 cm. long.
Pileus pallid tinged with pink. 32. *G. pulchrifolius.*
Pileus ferruginous or fulvous.
Stipe glabrous or nearly so, 1.5–3 mm. thick. 33. *G. granulosus.*
Stipe fibrillose.
Stipe 4 mm. thick, chrome-yellow. 34. *G. aromaticus.*
Stipe 4–8 mm. thick, dingy-yellow. 35. *G. eccentricus.*
Stipe 4–8 cm. long. 36. *G. penetrans.*
Pileus distinctly viscid.
Stipe whitish. 37. *G. subfulvus.*
Stipe yellow, purplish at the base. 38. *G. polychrous.*
Pileus 6–10 cm. broad.
Stipe 2.5–3.5 cm. long. 39. *G. multifolius.*
Stipe 5–12 cm. long.
Pileus glabrous. 40. *G. ludovicianus.*
Pileus not glabrous.
Pileus whitish or buff. 41. *G. lentus.*
Pileus yellowish-brown. 42. *G. Underwoodii.*
Pileus 10–15 cm. broad. 43. *G. magnus.*

II. SPECIES OCCURRING ON THE PACIFIC COAST

Species growing on the ground.
Pileus glabrous.
Pileus dry or moist, not viscid.
Pileus 1–2.5 cm. broad. 44. *G. fulvellus.*
Pileus 3–7 cm. broad.
Stipe 3–4 mm. thick. 45. *G. californicus.*
Stipe 5–7 mm. thick. 46. *G. pallidus.*
Pileus distinctly viscid.
Pileus isabelline with an incarnate tint, 2 cm. broad. 47. *G. viscidissimus.*
Pileus pale-yellow, with bay or brownish disk.
Stipe 2–5 mm. thick. 12. *G. spumosus.*

Stipe 7–11 mm. thick. 48. *G. spinulifer.*
Pileus testaceous-isabelline to orange; stipe 2–4 mm. thick. 11. *G. carbonarius.*
Pileus red to bay or reddish-cinnamon; stipe 4–8 mm. thick.
Lamellae ochraceous. 49. *G. subcarbonarius.*
Lamellae fulvous to brown. 50. *G. foedatus.*
Pileus fibrillose to squamulose.
Stipe 4 mm. thick; pileus flavo-melleous. 51. *G. ornatulus.*
Stipe 6–10 mm. thick; pileus grayish-brown. 52. *G. Abramsii.*
Stipe 13 mm. thick; pileus castaneous-fulvous. 53. *G. longisporus.*
Species growing on dead logs or stumps.
Pileus glabrous.
Pileus dry or moist, not viscid.
Pileus 1–2.5 cm. broad.
Pileus fulvous. 22. *G. bellulus.*
Pileus latericious. 54. *G. oregonensis.*
Pileus 3–5 cm. broad.
Stipe 3–5 mm. thick. 27. *G. flavidellus.*
Stipe 10–15 mm. thick. 55. *G. vialis.*
Pileus 5–10 cm. broad.
Pileus green. 56. *G. subviridis.*
Pileus isabelline. 57. *G. permollis.*
Pileus ferruginous or fulvous. 58. *G. echinulisporus.*
Pileus viscid.
Pileus 3–5 cm. broad.
Pileus melleous with fulvous center. 59. *G. subflavidus.*
Pileus ochroleucous with testaceous center. 60. *G. laeticolor.*
Pileus 9 cm. broad. 61. *G. latus.*
Pileus floccose or squamulose.
Pileus cremeous with castaneous umbo. 62. *G. decoratus.*
Pileus golden-tawny or ferruginous-fulvous. 36. *G. penetrans.*

III. SPECIES OCCURRING IN TROPICAL NORTH AMERICA

Species growing on the ground.
Stipe 2–4 mm. thick.
Surface of pileus dry. 63. *G. hypholomoides.*
Surface of pileus viscid. 11. *G. carbonarius.*
Stipe 10 mm. thick. 64. *G. jalapensis.*
Species growing on dead logs and stumps.
Pileus glabrous.
Pileus yellowish-olive; stipe 1.5 cm. long. 65. *G. olivaceus.*
Pileus yellowish-orange to greenish; stipe 4–7 cm. long. 66. *G. aureoviridis.*
Pileus melleous, ochraceous, or luteous. 27. *G. flavidellus.*
Pileus ferruginous to fulvous. 67. *G. chrysotrichoides.*
Pileus ferruginous-vinous. 68. *G. helvoliceps.*
Pileus red tinged with vinous. 69. *G. vinicolor.*
Pileus fibrillose to squamulose, sometimes becoming more or less glabrous with age.
Pileus golden-yellow.
Stipe 2.5 cm. long. 70. *G. chrysotrichus.*
Stipe 8 cm. long.
Lamellae decurrent. 71. *G. chrysopellus.*
Lamellae adnate. 72. *G. aureobrunneus.*
Pileus pale-yellow to ferruginous or ferruginous-orange.
Pileus 2–4 cm. broad, rarely reaching 6 cm.
Pileus umbilicate or depressed.
Stipe 2–2.5 cm. long. 73. *G. hispidus.*
Stipe 3–5 cm. long. 74. *G. palmicola.*
Pileus convex to expanded.
Stipe 2–4 cm. long.
Pileus ochraceous.
Context with mild taste. 75. *G. pholiotoides.*
Context with bitter taste.
Margin striate. 76. *G. parvulus.*
Margin not striate. 77. *G. hispidellus.*
Pileus ferruginous. 78. *G. bryophilus.*
Pileus ferruginous-orange. 79. *G. subpenetrans.*
Stipe 4–7 cm. long.
Pileus ochraceous. 80. *G. Nashii.*
Pileus pale-ferruginous. 81. *G. Earlei.*
Pileus 6–10 cm. broad.
Pileus becoming deeply depressed. 82. *G. depressus.*
Pileus not becoming deeply depressed.
Lamellae decurrent. 83. *G. tenuis.*
Lamellae adnate. 84. *G. areolatus.*
Pileus fulvous. 36. *G. penetrans.*
Pileus latericious. 85. *G. lateritius.*

1. **Gymnopilus sphagnicola** (Peck) Murrill.

Flammula sphagnicola Peck, Bull. N. Y. State Mus. 167: 43. 1913.

Pileus fleshy, thin, convex or nearly plane, obtuse or umbonate, 1–2.5 cm. broad; surface glabrous, viscid, yellowish, with the center reddish or reddish-brown, often spotted; context white; lamellae thin, narrow, crowded, adnate or with a decurrent tooth, whitish, becoming cinnamon-colored; spores ellipsoid, uninucleate, 8–10 × 4–6 μ; stipe slender, equal or slightly enlarged at the base, hollow, whitish, slightly white-fibrillose at the apex, with a white tomentum at the base, 2.5–3.5 cm. long, 1–3 mm. thick.

TYPE LOCALITY: Amesbury, Massachusetts.
HABITAT: Among sphagnum in swamps.
DISTRIBUTION: Known only from the type locality.

2. **Gymnopilus anomalus** (Peck) Murrill.

Flammula anomala Peck, Bull. Torrey Club 22: 202. 1895.

Pileus deeply umbilicate or infundibuliform, often irregular, commonly cespitose, about 2.5 cm. broad; surface glabrous, whitish; lamellae narrow, crowded, decurrent, pale-ferruginous; spores globose, brownish-ferruginous, 6 μ; stipe short, irregular, whitish, 1–2.5 cm. long.

TYPE LOCALITY: Trexlertown, Pennsylvania.
HABITAT: On the ground.
DISTRIBUTION: Known only from the type locality.

3. **Gymnopilus velatus** (Peck) Murrill.

Flammula velata Peck, Bull. Torrey Club 30: 96. 1903.

Pileus fleshy, thin toward the margin, convex, 2–4 cm. broad; surface moist, sulfur-yellow, reddish or orange at the center, margin persistently incurved; context yellow or greenish-yellow, the taste mild; lamellae arcuate, adnate or slightly decurrent, 5 mm. wide, pale-yellow, becoming rusty-brown or snuff-colored; spores ellipsoid, 5–8 μ long; stipe short, slender, flexuous, fibrillose, sulfur-yellow above, brownish and somewhat tomentose below, solid, 2.5–4.5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Idaho.
HABITAT: In woods along small streams.
DISTRIBUTION: Known only from the type locality.

4. **Gymnopilus alienus** (Peck) Murrill.

Flammula aliena Peck, Bull. Torrey Club 26: 65. 1899.

Pileus thin, flexible, broadly convex, umbilicate, gregarious, 3–5 cm. broad; surface dry, glabrous, grayish or pale-grayish-brown, margin slightly striate when old; context white, fibrous; lamellae thin, subdistant, arcuate, decurrent, ochraceous-brown; spores ferruginous-brown, globose, 5 μ in diameter; stipe firm, fibrous-striate, solid, slightly tapering upward, concolorous, covered at the base with a dense white tomentum, 5 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Mt. Gretna, Pennsylvania.
HABITAT: On partly buried anthracite coal.
DISTRIBUTION: Known only from the type locality.

5. **Gymnopilus rigidus** (Peck) Murrill.

Flammula rigida Peck, Ann. Rep. N. Y. State Mus. 50: 104. 1897.

Pileus thin, rather firm and rigid, convex, becoming nearly plane or centrally depressed, gregarious, 2.5–3.5 cm. broad; surface glabrous, hygrophanous, rusty-tawny or subferruginous when moist, buff or grayish-buff when dry, margin sometimes wavy; context concolorous; lamellae moderately crowded, adnate, creamy-white, becoming rusty-tan-colored or subferruginous; spores broadly ellipsoid, 7.5–8.5 × 4–5 μ; stipe equal or nearly so, tough, slightly striate, concolorous, with a compact, white tomentum on the lower part or at the base, 2.5–5 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Adirondack Mountains, New York.
HABITAT: On chip dirt about an old lumber camp.
DISTRIBUTION: New York.

6. **Gymnopilus farinaceus** Murrill, Mycologia 7: 222. 1915.

Flammula farinacea Murrill, Mycologia 9: 40. 1917.

Pileus convex to plane and at length upturned at the margin, solitary, 5 cm. broad; surface smooth, glabrous, somewhat hygrophanous, isabelline or pale-fulvous, fulvous on the disk; context white, thin, the taste decidedly sweet and farinaceous, the odor not characteristic; lamellae adnate to adnexed, rounded behind, very broad, subtriangular, purplish-brown, rather crowded; spores ellipsoid, smooth, ferruginous-melleous, 4–5 × 3–4 μ; stipe cylindric, equal, except at the expanded base, smooth, dry, glabrous, straw-colored, hollow, about 5 cm. long and 8 mm. thick.

TYPE LOCALITY: New York Botanical Garden.
HABITAT: On the ground in deciduous woods.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATION: Mycologia 7: *pl. 163, f. 3.*

7. **Gymnopilus Hallianus** (Peck) Murrill.

Agaricus Hallianus Peck, Ann. Rep. N. Y. State Cab. **23**: 90. 1872.
Flammula Halliana Sacc. Syll. Fung. **5**: 822. 1887.

Pileus thin, hemispheric or convex, 2.5–5 cm. broad; surface glabrous, hygrophanous, subferruginous when moist, dull-yellow when dry, margin obscurely striatulate when moist; lamellae crowded, subarcuate, slightly decurrent, tapering to a point at the outer extremity and ceasing before reaching the margin, ferruginous; spores ferruginous, 7.5–10 × 5–6 μ; stipe equal, slightly fibrillose, hollow, reddish-brown, 5–7.5 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Bethlehem, New York.
HABITAT: In pastures.
DISTRIBUTION: Known only from the type locality.

8. **Gymnopilus edulis** (Peck) Murrill.

Flammula edulis Peck, Bull. Torrey Club **24**: 142. 1897.

Pileus fleshy, convex, obtuse, cespitose, 5–7.5 cm. broad; surface glabrous, moist, brown, grayish-brown, or alutaceous-brown, sometimes rimose; context whitish, slightly bitter, edible; lamellae rather broad, crowded, decurrent, bright-tan-colored, becoming brownish-ferruginous; spores subellipsoid, 12.5 × 5–6 μ; stipe equal, stuffed or hollow, brown, 5–7.5 cm. long, 6–12 mm. thick.

TYPE LOCALITY: Haddonfield, New Jersey.
HABITAT: Grassy ground on street borders.
DISTRIBUTION: Known only from the type locality.

9. **Gymnopilus squalidus** (Peck) Murrill.

Flammula squalida Peck, Ann. Rep. N. Y. State Mus. **44**: 131 (19). 1891.

Pileus fleshy, convex or plane, firm, often very cespitose, 2.5–3.5 cm. broad; surface viscose, glabrous, dingy-yellowish or rufescent; context whitish but colored similar to the surface under the separable cuticle; lamellae rather broad, adnate, pallid, becoming dark-ferruginous; spores brownish-ferruginous, 7.5 × 4 μ; stipe slender, generally flexuose, hollow, fibrillose, pallid or brownish, pale-yellow at the apex when young, 3.5–7.5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Carrollton, New York.
HABITAT: In bushy and swampy places, especially alder swamps.
DISTRIBUTION: New York and Massachusetts.

10. **Gymnopilus highlandensis** (Peck) Murrill.

Agaricus highlandensis Peck, Ann. Rep. N. Y. State Mus. **24**: 67. 1872.
Agaricus ascophorus Peck, Ann. Rep. N. Y. State Mus. **24**: 68. 1872.
Naucoria highlandensis Sacc. Syll. Fung. **5**: 845. 1887.
Flammula highlandensis Peck, Ann. Rep. N. Y. State Mus. **50**: 138. 1897.
Naucoria subvelosa Murrill, Mycologia **4**: 164. 1912.
Hebeloma Peckii House, Bull. N. Y. State Mus. 179: 27. 1915.

Pileus fleshy, thin, hemispheric or convex, becoming nearly plane, 1.2–2.4 cm. broad; surface glabrous, viscid, yellowish-red, commonly paler or yellowish on the margin, which is

inflexed; context white or whitish, sometimes tinged with yellow under the tough, separable cuticle; lamellae crowded, rounded behind or adnate, sometimes with a decurrent tooth, pallid or yellowish when young, becoming ferruginous; spores ellipsoid, 6–8 × 3–5 μ; stipe equal, stuffed or hollow, fibrillose and minutely floccose-squamulose, yellowish, 2.5–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Near Highland Falls, New York.
HABITAT: On burnt ground or damp earth.
DISTRIBUTION: New England to New Jersey and west to Michigan.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **24**: *pl. 3, f. 1;* Mycologia **4**: *pl. 68, f. 2.*

11. **Gymnopilus carbonarius** (Fries) Murrill, Mycologia **4**: 256. 1912.

Agaricus carbonarius Fries, Obs. Myc. **2**: 33. 1818.
Flammula carbonaria Quél. Champ. Jura Vosg. 232. 1872.

Pileus convex to subplane, gregarious to subcespitose, 2–4 cm. broad; surface viscid, smooth, glabrous, testaceous-isabelline or varying from lighter yellow to orange or testaceous; margin inflexed when young, with a slight, stramineous, filamentous, evanescent veil; context thin, white or stramineous, the taste sweetish, the odor pleasant; lamellae squarely adnate or with a short decurrent tooth, plane or arcuate, broad, crowded, inserted, pale-yellow to fulvous; spores ellipsoid, smooth, fulvous in mass, 7–8 × 3–4.5 μ; cystidia abundant, 22–28 × 10–12 μ; stipe equal or slightly enlarged above, hollow or stuffed, white or cremeous, adorned below with reddish-brown fibrils, glabrous or granulose at the apex, about 5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: Usually in charred ground or on wood partly burned.
DISTRIBUTION: Throughout temperate North America; southern Florida and the mountains of Jamaica; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 442 (475);* Gill. Champ. Fr. *pl. 364 (283);* Lucand, Champ. Fr. *pl. 60;* Mycologia **4**: *pl. 68, f. 5;* Pat. Tab. Fung. **1**: *f. 111;* Ricken, Blätterp. Deutschl. *pl. 58, f. 3.*

12. **Gymnopilus spumosus** (Fries) Murrill, Mycologia **4**: 254. 1912.

Agaricus spumosus Fries, Syst. Myc. **1**: 252. 1821.
Flammula spumosa P. Karst. Bidr. Finl. Nat. Folk **32**: 404. 1879.

Pileus fleshy, thin, convex or nearly plane, obtuse or umbonate, gregarious or cespitose, 2.5–5 cm. broad; surface glabrous, viscid, pale-yellow, tinged with reddish-tawny or brownish hues at the center; context pale-yellow or greenish-yellow; lamellae thin, crowded, adnate, pale-yellow when young, becoming ferruginous or fulvous; spores ellipsoid, dark-ferruginous, 7.5 × 4–5 μ; stipe rather slender, equal or tapering at the base, fibrillose, hollow, yellowish, generally becoming brownish or ferruginous toward the base, 3.5–7.5 cm. long, 2–5 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: On the ground or rarely on decaying wood.
DISTRIBUTION: Canada to Alabama and west to Washington and California; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 476 (474);* Fries, Ic. Hymen. *pl. 116, f. 3;* Ricken, Blätterp. Deutschl. *pl. 57, f. 5.*

13. **Gymnopilus condensus** (Peck) Murrill.

Flammula condensa Peck, Bull. Torrey Club **33**: 217. 1906.

Pileus thin, convex or nearly plane, often irregular from its densely cespitose mode of growth, usually umbonate, 2–3 cm. broad; surface very viscid, brownish-yellow, the umbo reddish-brown or chestnut-colored; context white, often tinged with yellow; lamellae moderately broad, subdistant, adnate or slightly decurrent, sometimes rugosely wrinkled, yellowish becoming brownish-ferruginous; spores ellipsoid, 8–10 × 4–5 μ; stipe equal, hollow, yellowish at the apex, pallid or brownish toward the base, 2–4 cm. long, 2–3.5 mm. thick.

TYPE LOCALITY: Washington, D. C.
HABITAT: In clearings in pine woods and on stony hills.
DISTRIBUTION: Known only from the type locality.

14. **Gymnopilus alabamensis** Murrill, sp. nov.

Pileus convex to expanded, slightly umbonate, gregarious or subcespitose, 2–5 cm. broad; surface smooth, viscid, glabrous, pale-brownish-yellow, reddish-brown on the disk, margin entire, concolorous; context thin, yellow, with mild taste; lamellae adnate, subdistant to distant, rather narrow, tawny-yellow, becoming darker, entire and concolorous on the edges; spores ellipsoid, 8 × 4 μ; stipe long, equal, smooth, glabrous, yellow above, fulvous below, 5–10 cm. long, 3–6 mm. thick.

Type collected on clay banks, possibly attached to buried sticks or roots, at Auburn, Alabama, December 15, 1900, *F. S. Earle* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

15. **Gymnopilus graveolens** (Peck) Murrill.

Flammula graveolens Peck, Bull. N. Y. State Mus. 150: 54. 1911.

Pileus fleshy, broadly convex or nearly plane, sometimes slightly depressed at the center, sometimes cespitose, 2.5–7 cm. broad; surface viscid, glabrous or very obscurely innately fibrillose, reddish-brown or yellowish-brown, at first paler on the margin, the thin pellicle subseparable; context pale-yellow, the odor strong, earthy; lamellae thin, moderately crowded, adnate or slightly decurrent, pale-yellow, becoming subferruginous; spores ellipsoid, brownish-ferruginous, 6–8 × 4–5 μ; stipe equal or tapering at the base, solid or with a very narrow cavity, silky-fibrillose, pale-yellow without and within, becoming brownish at the base, 5–7 cm. long, 6–10 mm. thick; veil floccose or webby, pale-yellow, visible in the young plant, soon disappearing.

TYPE LOCALITY: West Gloucester, Massachusetts.
HABITAT: Under pine trees.
DISTRIBUTION: Massachusetts and New York.

16. **Gymnopilus fibrillosipes** Murrill, sp. nov.

Pileus fleshy, rather thick, convex to expanded, obtuse or nearly so, cespitose, 3–6 cm. broad; surface viscd, glabrous, reddish-brown, darker on the dısk, margin not striate, at first incurved and appendiculate; context yellow, slightly acrid; lamellae adnate or subdecurrent, crowded, rather broad, plane, yellow to cinnamon-colored; spores oblong-ellipsoid, cinnamon, about 8 × 4 μ; stipe cylindric or tapering toward the base, solid, densely fibrillose, especially when young, yellow, at length becoming brownish, bright-yellow within, 4–8 cm. long, 4–8 mm. thick; veil of tough, yellowish fibers.

Type collected on the ground in pine woods at the margin of a swamp north of Auburn, Alabama, January 6, 1900, *F. S. Earle* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

17. **Gymnopilus castaneus** Murrill, sp. nov.

Pileus convex to subexpanded, subumbonate, solitary, 3–5 cm. broad; surface viscid when moist, the pellicle separable, dark-rich-chestnut, margin not striate, incurved; context dark-yellow, mild; lamellae decurrent, subdistant, broad, subconcolorous; spores dark-ferruginous, ellipsoid, 7–8 × 4 μ; stipe cylindric, minutely fibrillose to glabrous, solid, yellowish-brown, concolorous in dried specimens, 4–5 cm. long, 5 mm. thick.

Type collected on the ground in pine woods at Auburn, Alabama, December 16, 1900, *F. S. Earle* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

18. **Gymnopilus brunneodiscus** (Peck) Murrill.

Flammula brunneodisca Peck, Bull. N. Y. State Mus. 167: 42. 1913.

Pileus fleshy, thin, broadly convex or nearly plane, umbonate, cespitose, 2.5–6 cm. broad; surface slightly viscid, with a separable pellicle, slightly innately fibrillose, ochraceous-yellow, brown at the center; context white; lamellae thin, crowded, adnate with a decurrent tooth,

pale-yellow, becoming rusty-brown; spores ellipsoid, 6–8 × 4–5 μ; stipe slender, equal, solid, glabrous, pale-yellow without and within, paler at the apex, 2–3 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Waltham, Massachusetts.
HABITAT: Probably in damp soil.
DISTRIBUTION: Known only from the type locality.

19. **Gymnopilus tricholoma** (Alb. & Schw.) Murrill.

Agaricus tricholoma Alb. & Schw. Consp. Fung. 188. 1805.
Flammula tricholoma Quél. Ench. Fung. 232. 1872.
Inocybe tricholoma Sacc. Syll. Fung. 5: 790. 1887.
Paxillus strigosus Peck, Bull. Buffalo Soc. Nat. Sci. 1: 56. 1873.
? *Paxillus microsporus* Peck, Bull. N. Y. State Mus. 157: 51. 1912.

Pileus convex to depressed, solitary, 2.5–4 cm. broad; surface dry or slightly viscid, white or whitish, decorated with white, appressed fibrils, margin concolorous, strigose-ciliate; lamellae decurrent, crowded, narrow, whitish or clay-colored to avellaneous, becoming darker on drying; spores broadly ellipsoid or subglobose, echinulate, 4 × 3 μ; cystidia none; stipe equal, white or pallid, smooth, 2–4 cm. long and 3–6 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: Among leaves, mosses, or grass in woods or groves.
DISTRIBUTION: Northern New York, Massachusetts, and New Jersey; also in Europe.
ILLUSTRATION: Gill. Champ. Fr. *pl. 363 (286)*.

20. **Gymnopilus autumnalis** (Peck) Murrill.

Agaricus autumnalis Peck, Ann. Rep. N. Y. State Cab. **23**: 92. 1872.
Naucoria autumnalis Sacc. Syll. Fung. 5: 834. 1887.

Pileus thin, fleshy, convex, often cespitose, 1.2–2.5 cm. broad; surface smooth, hygrophanous, watery-cinnamon when moist, dull-yellow when dry, margin striatulate when moist; context poisonous; lamellae crowded, slightly emarginate, spuriously decurrent-toothed, easily separating from the stipe, yellowish, becoming cinnamon; stipe slender, equal, hollow, fibrillose, paler than the pileus; 2.5–5 cm. long; veil slight, evanescent or persisting as an imperfect annulus.

TYPE LOCALITY: North Greenbush, New York.
HABITAT: On decayed wood in woods.
DISTRIBUTION: Northern New York.

21. **Gymnopilus geminellus** (Peck) Murrill.

Agaricus geminellus Peck, Bull. Buffalo Soc. Nat. Sci. 1: 51. 1873.
Naucoria geminella Sacc. Syll. Fung. 5: 841. 1887.

Pileus convex, 1–2 cm. broad; surface even, dry, firm, yellowish-red, the margin paler; context white; lamellae crowded, emarginate, pale-yellow; spores 8 × 5 μ; stipe equal, smooth, concolorous, containing a white pith or a small cavity, 2 cm. or more long.

TYPE LOCALITY: Croghan, New York.
HABITAT: On rotten wood.
DISTRIBUTION: New York.

22. **Gymnopilus bellulus** (Peck) Murrill.

Agaricus bellulus Peck, Bull. Buffalo Soc. Nat. Sci. 1: 51. 1873.
Naucoria bellula Sacc. Syll. Fung. 5: 841. 1887.
? *Gymnopilus Hillii* Murrill, Mycologia 4: 253. 1912.

Pileus thin, convex, sometimes cespitose, 1.2–2.5 cm. broad; surface moist, smooth, bright-watery-cinnamon; lamellae crowded, narrow, emarginate, yellow, becoming darker with age; spores 5 × 3 μ; stipe equal, hollow, generally curved, smooth, reddish-brown, 2.5 cm. long.

TYPE LOCALITY: Lowville, New York.
HABITAT: On decaying hemlock trunks in woods.
DISTRIBUTION: Canada and New York.

23. **Gymnopilus pusillus** (Peck) Murrill.

Flammula pusilla Peck, Bull. N. Y. State Mus. 67: 26. 1903.

Pileus thin, convex, becoming nearly plane, 1.2–2.5 cm. broad; surface glabrous, viscid, pale-buff or yellow-ferruginous; lamellae narrow, crowded, adnate, whitish when young, brown-

ish-ferruginous when mature; spores ellipsoid, 7.5 × 4 μ; stipe short, equal, solid or stuffed, floccose-fibrillose, whitish, becoming ferruginous toward the base, which is slightly villose-strigose, the apex flocculent-pulverulent, 1.5–3 cm. long, about 2 mm. thick.

TYPE LOCALITY: Smithtown, Suffolk County, New York.
HABITAT: On roots of stumps and water-soaked wood in open places.
DISTRIBUTION: New York.
ILLUSTRATIONS: Bull. N. Y. State Mus. 67: *pl. M, f. 35–41.*

24. **Gymnopilus viscidus** (Peck) Murrill.

Flammula viscida Peck, Ann. Rep. N. Y. State Mus. 51: 290. 1898.

Pileus hemispheric or convex, densely cespitose, 1.2–2.4 cm. broad; surface glabrous, pale-yellow, the pellicle viscid, separable; margin obscurely striatulate when moist, incurved when young; context white; lamellae thin, crowded, emarginate, adnexed, whitish when young, becoming dark-ferruginous; spores broadly ellipsoid, brownish-ferruginous, 6–7.5 × 4–5 μ; stipe equal, fibrous, hollow but the cavity small, sometimes squamulose, pallid or subferruginous, 2.5–5 cm. long, 3–4 mm. thick.

TYPE LOCALITY: North Elba, New York.
HABITAT: On decaying wood of alder, *Alnus incana.*
DISTRIBUTION: Known only from the type locality.

25. **Gymnopilus squamulosus** Murrill, sp. nov.

Pileus convex, not fully expanding, gibbous, solitary, 2 cm. broad; surface dry, finely squamulose, uniformly ferruginous, margin entire, concolorous; lamellae adnate, crowded, broad, plane, ferruginous to fulvous at maturity, yellowish and somewhat crenulate on the edges; spores ellipsoid, smooth, melleous under the microscope, uniguttulate, 8–9 × 5–6 μ; stipe tapering downward, short, subconcolorous, fibrillose, rather tough, 2 cm. long, 2 mm. thick.

Type collected on dead wood in woods near the New York Botanical Garden, September 13, 1910, *W. A. Murrill* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

26. **Gymnopilus fagicola** Murrill, sp. nov.

Pileus hemispheric, not fully expanding, slightly umbonate, cespitose, 2 cm. broad; surface dry, densely imbricate-squamulose, uniformly fulvous; lamellae adnate, distant, arcuate, broad, melleous to ferruginous, beautifully crenulate and yellow on the edges; spores ellipsoid, smooth, melleous under the microscope, 7–8 × 4–5 μ; stipe equal, slender, rather tough, solid, dry, ochraceous, becoming darker at the base, rough with rather coarse fibrils, 3 cm. long, 2 mm. thick.

Type collected on a dead beech log at Lake Placid, Adirondack Mountains, New York, July 17–29, 1912, *W. A. & Edna L. Murrill 183* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

27. **Gymnopilus flavidellus** Murrill, sp. nov.

Pileus convex to plane or slightly depressed, gregarious or subcespitose, 3–5 cm. broad; surface dry or moist, smooth, glabrous, not striate, melleous to ochraceous or luteous at the center, margin entire, cream-colored; context yellowish, with mawkish, slightly bitter taste; lamellae adnate or sinuate with a decurrent tooth, rather crowded and narrow, pale-yellow to ferruginous; spores ovoid, minutely echinulate, ferruginous, 8–9 × 5–6 μ; stipe subequal, solid to hollow, pale-yellow to yellowish-brown, pruinose at the apex, whitish-mycelioid at the base, 3–5 cm. long, 3–5 mm. thick; veil arachnoid, fugacious.

Type collected on a chestnut stump in woods at the New York Botanical Garden, September 9, 1911, *W. A. Murrill* (herb. N. Y. Bot. Gard.).
HABITAT: On dead wood of various deciduous and coniferous trees.
DISTRIBUTION: Throughout most of temperate North America; also in Bermuda.

28. **Gymnopilus praecox** (Peck) Murrill.

Flammula praecox Peck, Bull. Torrey Club 36: 334. 1909.

Pileus fleshy, convex, becoming nearly plane, gregarious or cespitose, about 3 cm. broad; surface glabrous, moist or hygrophanous, brown or reddish-brown, paler when old and dry,

sometimes with a dull-greenish tint, margin at first involute; context pallid; lamellae rather crowded, adnate or sometimes slightly rounded behind, pale-ochraceous, becoming brownish-ochraceous, whitish and minutely crenulate or eroded on the edges; spores subochraceous, ellipsoid, 7–8 × 4–5 μ; stipe equal or slightly tapering upward, becoming hollow with age, silky-fibrillose, slightly floccose or furfuraceous at the apex when young from the pure-white, slight, evanescent veil, pallid, with a soft white tomentum at the base, 2–4 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Rockville, Indiana.
HABITAT: On decaying wood, bark, or branches of deciduous trees, commonly basswood, *Tilia americana*, or even on dead herbaceous stems.
DISTRIBUTION: Known only from the type locality.

29. **Gymnopilus unicolor** Murrill, sp. nov.

Pileus convex to subexpanded, obtuse, gregarious, not cespitose, 3–5 cm. broad; surface glabrous, hygrophanous, not viscid, dark-umbrinous, becoming dull-brownish-ochraceous when dry, margin not striate, always decurved; lamellae heterophyllous, rather long-decurrent, subdistant, broad, arcuate to subplane, dull-yellow, becoming dull-cinnamon; spores ellipsoid, dull-cinnamon, 10 × 6 μ; stipe tough, cylindric, subglabrous, subconcolorous, solid but stuffed with fibers within, 4–6 cm. long, 4–6 mm. thick; veil brownish, soon evanescent or subannulate.

Type collected on a wet, very rotten log in a swamp north of Auburn, Alabama, January 6, 1900, *Esther S. Earle* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

30. **Gymnopilus piceinus** Murrill, sp. nov.

Pileus convex to expanded, obtuse, scattered or cespitose, 3–5 cm. broad; surface very viscid, glabrous, bright-yellow, darker and reddish on the disk, margin not striate; context greenish-yellow, with nearly mild taste; lamellae heterophyllus, sinuate-decurrent, subcrowded, rather broad, plane, yellow to pale-fuscous; spores ellipsoid, pale-fuscous, 7–8 × 4–5 μ; stipe cylindric, somewhat fibrillose, concolorous but darker at the base, stuffed, becoming hollow, 3–5 cm. long, 4–6 mm. thick.

Type collected on a much decayed spruce tree at Bar Harbor, Maine, August, 1901, *V. S. White 129* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

31. **Gymnopilus alnicola** (Fries) Murrill.

Agaricus alnicola Fries, Syst. Myc. 1: 250. 1821.
Flammula alnicola Quél. Champ. Jura Vosg. 233. 1872.
Flammula sulphurea Peck, Bull. N. Y. State Mus. 157: 26. 1912. Not *F. sulphurea* Massee, 1902.

Pileus fleshy, subconic or convex, becoming broadly convex, cespitose or densely gregarious, 3–6 cm. broad; surface glabrous, viscid, hygrophanous, yellow, at length becoming rust-colored, sometimes with whitish, silky, fibrillose scales on the margin; context white when dry, the taste bitter, disagreeable; lamellae thin, broad, crowded, arcuate, adnate, crenulate on the edges, pallid, becoming dark-ferruginous; spores ellipsoid, dark-ferruginous, 8–11 × 5–6 μ; stipe equal, curved or flexuous, radicate, fibrillose or squamulose below, stuffed or hollow, pale-yellow and naked at the apex, ferruginous toward the base, 3–8 cm. long, 4–10 mm. thick; veil manifest, fibrillose or arachnoid.

TYPE LOCALITY: Europe.
HABITAT: At the base of birch, maple, apple, and other frondose trees.
DISTRIBUTION: New England and New York; also in Europe.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **54**: *pl. G, f. 8–14;* Bull. N. Y. State Mus. 157: *pl. VII, f. 7–11;* Cooke, Brit. Fungi *pl. 443 (480);* Gill. Champ. Fr. *pl. 366 (282);* Ricken, Blätterp. Deutschl. *pl. 58, f. 5.*

32. **Gymnopilus pulchrifolius** (Peck) Murrill.

Flammula pulchrifolia Peck, Bull. N. Y. State Mus. 122: 21. 1908.

Pileus fleshy but thin, hemispheric, becoming convex, 2.5–5 cm. broad; surface slightly viscid when moist, hygrophanous, fibrillose or, in large specimens, squamulose at the center

and fibrillose on the margin, pale-pink or pallid on the margin and pink at the center; context white, the taste bitter and unpleasant; lamellae thin, crowded, adnate, sometimes slightly sinuate, whitish, soon bright-tawny or Indian-yellow, becoming bright-tawny-ochraceous with age; spores bright-tawny-ochraceous in a thick layer, ochraceous-buff in a thin one, 7.5 × 5–6 μ; stipe equal or nearly so, stuffed or hollow, pallid, sometimes yellowish at the base, fibrillose at the apex from the remains of the veil, 2.5–3.5 cm. long, 3–4 mm. thick.

TYPE LOCALITY: Menands, Albany County, New York.
HABITAT: On decaying wood of hemlock.
DISTRIBUTION: Northern New York, Massachusetts, Minnesota, and Indiana.

33. **Gymnopilus granulosus** (Peck) Murrill.

Flammula granulosa Peck; V. White, Bull. Torrey Club **29**: 561. 1902.

Pileus thin, hemispheric, becoming convex, solitary, 2.5–3.5 cm. broad; surface dry, densely squamulose, tawny; context with slightly nutty taste; lamellae thin, rather broad, subdistant, adnate or slightly decurrent, pale-yellow, becoming tawny-ferruginous; spores ellipsoid, generally uninucleate, 7–8 × 4–5 μ; stipe fleshy, rather slender, stuffed, glabrous or sometimes minutely squamulose, concolorous, 2.5–3 cm. long, 1.5–3 mm. thick.

TYPE LOCALITY: Bar Harbor, Mount Desert, Maine.
HABITAT: On decaying coniferous wood or sawdust.
DISTRIBUTION: Maine to Pennsylvania.

34. **Gymnopilus aromaticus** Murrill, sp. nov.

Pileus convex to expanded, thin, somewhat cespitose, 3 cm. broad; surface conspicuously floccose, areolate with age, yellowish-ferruginous, margin not striate; context whitish, aromatic, with the taste of birch twigs; lamellae adnexed, crowded, rather narrow, yellow to bright-ferruginous; spores ferruginous, ellipsoid, 8 × 4 μ; stipe cylindric, densely yellow-fibrillose, chrome-yellow, solid, hard, whitish within, 2–3 cm. long, 4 mm. thick.

Type collected on a dead hemlock at West Park, New York, August 9, 1903, *F. S. Earle 1854* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Maine and New York.

35. **Gymnopilus eccentricus** (Peck) Murrill.

Flammula eccentrica Peck, Bull. Torrey Club **31**: 179. 1904.

Pileus thin, broadly convex, obtuse or slightly umbilicate, 2.5–3.5 cm. broad; surface dry, minutely squamulose, tawny, yellowish, or reddish-ferruginous; context whitish; lamellae rather broad, crowded, somewhat sinuate-adnate, dingy-ochraceous, becoming ferruginous; spores bright-ferruginous, ellipsoid, 15–16 × 8 μ; stipe equal or slightly tapering upward, commonly eccentric, solid, fibrillose, yellowish or dingy-ochraceous, becoming brownish without and within, 2–3 cm. long, 4–8 mm. thick.

TYPE LOCALITY: St. Louis, Missouri.
HABITAT: On decaying wood.
DISTRIBUTION: Known only from the type locality.

36. **Gymnopilus penetrans** (Fries) Murrill, Mycologia **4**: 254. 1912.

Agaricus penetrans Fries, Obs. Myc. **1**: 23. 1815.
Flammula penetrans Quél. Champ. Jura Vosg. 233. 1872.

Pileus conic or convex to plane, gregarious or sometimes cespitose, 3–6 cm. broad; surface dry, slightly floccose-squamulose when young, often becoming squamose or rimose with age, golden-tawny or ferruginous-fulvous, sometimes much darker in old or dried specimens; lamellae adnate, crowded, cream-colored to ferruginous or fulvous, changing to reddish-fulvous when bruised, entire and concolorous on the edges; spores ovoid or ellipsoid, smooth, melleous under the microscope, 7–9 × 3.5–5 μ; stipe rather short, often irregular, equal or tapering upward, whitish-fibrillose streaked with yellow or brown, often much darker below with age, whitish- or yellowish-mycelioid at the base, 4–8 cm. long, 5–10 mm. thick; veil slight, floccose, fugacious.

TYPE LOCALITY: Sweden.
HABITAT: On dead coniferous wood, usually on pine.
DISTRIBUTION: Throughout temperate North America; Cuba and Jamaica; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 447* (*487*) (as *Agaricus sapineus*); Fries, Ic. Hymen. *pl. 118, f. 2.*
EXSICCATI: Ellis, N. Am. Fungi *906* (as *Agaricus sapineus*).

37. **Gymnopilus subfulvus** (Peck) Murrill.

Flammula subfulva Peck, Ann. Rep. N. Y. State Mus. **41**: 68. 1888.

Pileus convex, more or less cespitose, 3.5–6 cm. broad; surface viscid, innately fibrillose, sordid-tawny, spotted toward the margin with darker colored, appressed scales; context grayish-white; lamellae crowded, adnate, becoming ferruginous; spores ellipsoid, uninucleate, brownish-ferruginous, 6–7.5 × 4 μ; stipe equal or slightly tapering upward, fibrillose, solid, whitish, 5–7.5 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Catskill Mountains, New York.
HABITAT: About the bases of trees.
DISTRIBUTION: New York and Pennsylvania.

38. **Gymnopilus polychrous** (Berk.) Murrill.

Agaricus polychrous Berk. Lond. Jour. Bot. **6**: 313. 1847.
Agaricus ornellus Peck, Ann. Rep. N. Y. State Mus. **34**: 42. 1883.
Flammula polychroa Sacc. Syll. Fung. **5**: 824. 1887.
Pholiota appendiculata Peck, Bull. N. Y. State Mus. 94: 33. 1905.
Pholiota ornella Peck, Bull. N. Y. State Mus. 122: 151. 1908.

Pileus fleshy, firm, convex or nearly plane, broadly umbonate, solitary or cespitose, 4–6 cm. broad; surface very viscid, slightly squamose, of many colors, purple when young, changing to buff or light-yellow on the margin with the umbo purple or brownish-yellow, margin floccose-appendiculate; lamellae broad, rather distant, sinuate, adnate, or slightly decurrent, at first dirty-white, becoming brownish-purple and at length yellowish-brown; spores ellipsoid, smooth, yellowish under the microscope, brown in mass, 6–7 × 4 μ; stipe firm, nearly equal, somewhat woody, at first furfuraceous, solid, pale-yellow, often purplish at the base, 2.5–7 cm. long, 3–5 mm. thick; veil evanescent, consisting of purple and yellow fibers.

TYPE LOCALITY: Waynesville, Ohio.
HABITAT: On dead deciduous branches and logs.
DISTRIBUTION: New England to Alabama and west to Wisconsin.
ILLUSTRATIONS: Atk. Stud. Am. Fungi ed. 1. *f. 147;* ed. 2. *f. 151;* Bull. N. Y. State Mus. 94: *pl. P, f. 8–17.*

39. **Gymnopilus multifolius** (Peck) Murrill.

Flammula multifolia Peck, Bull. Torrey Club **32**: 79. 1905.
Flammula expansa Peck, Bull. N. Y. State Mus. 116: 24. 1907.

Pileus convex, subumbonate, 6–8 cm. broad; surface glabrous or obscurely fibrillose, tawny-yellow, sometimes paler on the margin and darker at the center, margin incurved; context faintly tinged with yellow; lamellae narrow, numerous, crowded, rounded behind, adnexed, concolorous or a little paler than the pileus, the edges crenulate with yellow or reddish-yellow glandular drops; spores subglobose, 4–5 μ; stipe equal or slightly thickened at the base, solid, floccose, fibrillose or subglabrous, yellow, sometimes eccentric, 2.5–3.5 cm. long, 2–5 mm. thick.

TYPE LOCALITY: St. Louis, Missouri.
HABITAT: On decaying wood in ravines and on dead logs.
DISTRIBUTION: New York, Missouri, and the mountains of western North Carolina.

40. **Gymnopilus ludovicianus** Murrill, sp. nov.

Pileus firm, depressed, 6–10 cm. broad; surface glabrous, moist, not viscid, pale-yellowish-tan, margin not striate, upturned; context white, mild; lamellae adnate, crowded, narrow, pale-cinnamon; spores subovoid, smooth, melleous under the microscope, 8–9 × 6–7 μ; stipe cylindric, often curved, firm, white, glabrous, solid, 10–12 cm. long, 1 cm. thick.

Type collected at the base of a living maple tree in City Park, New Orleans, September 3, 1908, *F. S. Earle 39* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

41. **Gymnopilus lentus** (Pers.) Murrill.

Agaricus lentus Pers. Syn. Fung. 287. 1801.
Flammula lenta Gill. Champ. Fr. **1**: 533. 1878.
Flammula betulina Peck, Bull. Torrey Club **34**: 100. 1907.

Pileus fleshy, convex, becoming nearly plane, 6–10 cm. broad; surface floccose or fibrillose, smooth or roughish, viscid when young, subviscid when old, whitish or buff, some-

times slightly appendiculate on the margin; context white; lamellae thin, broad, crowded, ventricose, adnate or decurrent with a tooth, whitish, becoming cinnamon-brown; spores ellipsoid, 6–8 × 4–5 μ; stipe fleshy, fragile, equal, fibrous, stuffed, striate at the apex, whitish, 5–7 cm. long, 6–9 mm. thick.

TYPE LOCALITY: Europe.
HABITAT: On dead trunks.
DISTRIBUTION: New York to South Carolina in the eastern United States; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 439 (469), 440 (470);* Gill. Champ. Fr. *pl. 116 (284).*

42. **Gymnopilus Underwoodii** (Peck) Murrill.

Flammula Underwoodii Peck, Bull. Torrey Club **23**: 415. 1896.

Pileus convex or nearly plane, often irregular from its densely cespitose mode of growth, 6–10 cm. broad; surface squamulose or furfuraceous, yellowish-brown; lamellae rather broad, crowded, adnate or slightly decurrent, yellow; spores ellipsoid, ochraceous, 6–7.5 × 4–5 μ; stipe tapering downward, radicate, longitudinally streaked with brownish hues, yellow at the apex, 5–10 cm. long, 6–12 mm. thick.

TYPE LOCALITY: Alabama.
HABITAT: On pine trunks.
DISTRIBUTION: Virginia to Florida.

43. **Gymnopilus magnus** (Peck) Murrill.

Flammula magna Peck, Ann. Rep. N. Y. State Mus. **50**: 103. 1897.
Cortinarius validipes Peck, Bull. N. Y. State Mus. 116: 20. 1907.

Pileus fleshy, soft, broadly convex, cespitose, 10–15 cm. broad; surface dry, fibrillose and somewhat virgate, pale-yellow or buff, margin commonly becoming revolute with age; context whitish or yellowish; lamellae crowded, adnate or slightly decurrent, often crisped or wavy toward the stipe, about 6 mm. wide, ochraceous; spores subellipsoid, ochraceous, 8–10 × 5–6 μ; stipe equal or thickened toward the base, fleshy-fibrous, solid, elastic, fibrillose, concolorous, brighter yellow within, 7.5–10 cm. long, 1.5–5 cm. thick.

TYPE LOCALITY: Westchester County, New York.
HABITAT: About the bases of trees.
DISTRIBUTION: New York.

44. **Gymnopilus fulvellus** (Peck) Murrill, Mycologia **4**: 253. 1912.

Flammula fulvella Peck; J. M. Macoun, in D. S. Jordan, Fur Seals N. Pacif. **3**: 584. 1899.

Pileus thin, convex or nearly plane, 1.2–2.4 cm. broad; surface glabrous, subtawny, the margin deflexed or incurved; context whitish; lamellae thin, subdistant, adnate or slightly decurrent, somewhat tawny, inclining to ochraceous-tawny; spores ellipsoid, 12.5 × 7.5 μ; stipe equal, solid, fibrillose or fibrillose-squamulose, concolorous, 2.5 cm. long, 3–4 mm. thick.

TYPE LOCALITY: St. Paul Island, Bering Sea.
HABITAT: On low ground.
DISTRIBUTION: Known only from the type locality.

45. **Gymnopilus californicus** (Earle) Murrill, Mycologia **4**: 253. 1912.

Flammula californica Earle, Bull. N. Y. Bot. Gard. **2**: 342. 1902.

Pileus expanded, subumbonate, gregarious or cespitose, 4–7 cm. broad; surface glabrous, subhygrophanous, pale-ochraceous-brown, often darker on the umbo, margin entire; context cream-colored, unchanging, the taste and smell mild; lamellae subsinuate-decurrent, heterophyllous, crowded, subventricose, pale-ochraceous to fusco-ferruginous; spores ferruginous, ellipsoid, 6–7 × 4 μ; stipe subequal, slightly enlarged at the apex and base, glabrous above, brown-fibrillose below, pale-brown, yellowish-white at the apex, solid, white-mycelioid at the base, 5–6 cm. long, 3–4 mm. thick.

TYPE LOCALITY: Stanford University, California.
HABITAT: Under trees, probably from buried rotten wood.
DISTRIBUTION: Vicinity of Stanford University, California.

46. **Gymnopilus pallidus** Murrill; Mycologia 4: 252. 1912.

Flammula pallida Murrill, Mycologia 4: 262. 1912.

Pileus irregularly convex to plane, umbonate, 3–7 cm. broad; surface dull-yellowish-gray, dry, smooth, glabrous, margin inflexed; context hyaline to grayish, watery, without characteristic taste or odor; lamellae adnexed, crowded, broad, falcate, grayish-white to fulvous; spores broadly ellipsoid, smooth, ochraceous-ferruginous under the microscope, fulvous in mass, 8–9 × 3.5–4.5 μ; stipe stout, pallid, hollow, fibrillose, 3–4 cm. long, 5–7 mm. thick; veil slight, evanescent, leaving no annulus.

TYPE LOCALITY: New Westminster, British Columbia.
HABITAT: On the ground under conifers.
DISTRIBUTION: Known only from the type locality.

47. **Gymnopilus viscidissimus** Murrill, Mycologia 4: 256. 1912.

Flammula viscidissima Murrill, Mycologia 4: 262. 1912.

Pileus conic, not fully expanding, gregarious, 2 cm. broad; surface smooth, glabrous, very slimy, isabelline with an incarnate tint, usually a little darker at the center; lamellae sinuate-adnate, broad, ventricose, rather crowded, pale-isabelline, becoming darker with age; spores ovoid, pointed, often one-sided, very pale with a fuscous tint under the microscope, dark-fulvous in mass, 7 × 3–4 μ; stipe equal or slightly larger below, stuffed, whitish, furfuraceous above, fibrillose below, rather tough, 6 cm. long, 3.5 mm. thick.

TYPE LOCALITY: Mill City, Oregon.
HABITAT: Among mosses and humus on the ground in woods and in a peat bog.
DISTRIBUTION: Washington and Oregon.

48. **Gymnopilus spinulifer** Murrill, Mycologia 4: 254. 1912.

Flammula spinulifer Murrill, Mycologia 4: 262. 1912.

Pileus convex, umbonate, at length expanding and losing the umbo, scattered or clustered, 3.5–8 cm. broad; surface smooth, glabrous, viscid, light-yellow with bay center, margin entire; context cremeous, without characteristic taste or odor; lamellae adnate or very slightly sinuate, plane, of medium breadth and distance, yellowish to ferruginous; spores ovoid to ellipsoid, smooth, pale-melleous under the microscope, dark-fulvous in mass; cystidia hyaline, flask-shaped, with short, narrow neck and long stalk, 70 × 15 μ; stipe equal, hollow, subglabrous, with conspicuous mycelium at the base, yellowish-white or tinged with bay, 5–9 cm. long, 7–11 mm. thick; veil arachnoid, whitish, leaving a small ring of fibrils near the apex of the stipe.

TYPE LOCALITY: Portola, California.
HABITAT: On the ground among leaves under redwoods.
DISTRIBUTION: California.

49. **Gymnopilus subcarbonarius** Murrill, Mycologia 4: 256. 1912.

Flammula subcarbonaria Murrill, Mycologia 4: 262. 1912.

Pileus convex to expanded, rarely umbonate, rather thin, gregarious, 3–4 cm. broad; surface smooth, glabrous, very viscid, red to bay, yellow on the margin, sometimes darker at the center; lamellae adnate or sinuate, not crowded, rather narrow, inserted, pale-yellow to ochraceous or fulvous; spores ellipsoid, smooth, melleous under the microscope, fulvous in mass, 7 × 3–4 μ; stipe short, somewhat enlarged below, white, scaly, hollow, 3–4 cm. long, 4–8 mm. thick; veil fibrillose, evanescent, not leaving an annulus.

TYPE LOCALITY: Berkeley, California.
HABITAT: On the ground.
DISTRIBUTION: Known only from the type locality.

50. **Gymnopilus foedatus** (Peck) Murrill, Mycologia 4: 257. 1912.

Hebeloma foedatum Peck, Bull. Torrey Club 22: 202. 1895.

Pileus fleshy, convex, becoming plane or centrally depressed, 3.5–7.5 cm. broad; surface glabrous, very viscid or glutinous, reddish-cinnamon; context yellowish-white; lamellae sub-ventricose, slightly decurrent, scarcely sinuate, cinnamon-colored, becoming mummy-brown;

spores broadly ellipsoid, 6–7.5 × 4–5 μ; stipe solid, equal or slightly thickened at the base, fibrillose, paler than the pileus, 3.5–6.5 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Pasadena, California.
HABITAT: On the streets or among oak leaves.
DISTRIBUTION: Southern California.

51. **Gymnopilus ornatulus** Murrill, Mycologia 4: 251. 1912.

Flammula ornatula Murrill, Mycologia 4: 262. 1912.

Pileus convex to nearly plane, gibbous or umbonate, cespitose, 3 cm. broad; surface dry, slightly viscid when wet, fibrillose, flavo-melleous tinged with pale-rose-brown, the latter color more conspicuous at the center; lamellae adnate, plane, broad, of medium distance, pallid when young, becoming pale-fulvous from the spores; spores ellipsoid, smooth, pale-melleous under the microscope, 6 × 3.5–4 μ; stipe smooth, glabrous and cremeous at the apex, subconcolorous and shaggy-fibrillose below, 5 cm. long, 4 mm. thick.

TYPE LOCALITY: Preston's Ravine, California.
HABITAT: On a bank by the roadside.
DISTRIBUTION: Known only from the type locality.

52. **Gymnopilus Abramsii** Murrill, sp. nov.

Pileus convex to subexpanded, scattered, 4–6 cm. broad; surface dry or nearly so, grayish-brown, decorated with reddish-brown fibrils or scales, margin entire, concolorous; context white, without characteristic odor or taste; lamellae adnate or adnexed, crowded, ventricose, creamy-pink to ferruginous; spores ellipsoid, smooth, bright-ferruginous, 8 × 4–5 μ; stipe cylindric or slightly compressed, white, solid, smooth, slightly arachnoid-fibrillose, 6–8 cm. long, 6–10 mm. thick.

Type collected on the ground among oak leaves at Stanford University, California, November 27, 1902, *L. R. Abrams & James McMurphy 65* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

53. **Gymnopilus longisporus** Murrill, sp. nov.

Pileus irregular, convex to expanded and at length somewhat depressed, solitary, about 4 cm. broad; surface subtomentose, hygrophanous, uniformly castaneous-fulvous, margin entire, concolorous, inflexed, context thick, yellow; lamellae adnate, thick, subdistant, rather narrow, watery-flavous, entire and concolorous on the edges; spores oblong-fusiform, smooth, melleous under the microscope, uniguttulate, 8–10 × 5–6 μ; stipe enlarged below, somewhat fibrillose, longitudinally streaked, avellaneous to sulfureous, flavous-mycelioid at the base, 5 cm. long, 1.3 cm. thick.

Type collected on the ground in a coniferous forest at Mill City, Oregon, November 9, 1911, *W. A. Murrill 819* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

54. **Gymnopilus oregonensis** Murrill, sp. nov.

Pileus conic to hemispheric-convex, not fully expanding, gregarious, 1.5–2.5 cm. broad; surface dry or moist, smooth, glabrous, uniformly latericious, margin entire, concolorous, deflexed; lamellae adnexed, broad, not crowded, cremeous to fulvous; spores ovoid, finely echinulate, pale-ferruginous under the microscope, 8.5 × 5–6 μ; stipe equal, hollow, smooth, latericious or slightly paler, whitish-pulverulent throughout, becoming more or less glabrous with age, 2–3 cm. long, 3–5 mm. thick.

Type collected on a dead fir log in a dense fir forest at Glen Brook, Oregon, November 7, 1911, *W. A. Murrill 739* (herb. N. Y. Bot. Gard.).
HABITAT: On dead coniferous logs.
DISTRIBUTION: Oregon.

55. **Gymnopilus vialis** Murrill, Mycologia 4: 255. 1912.

Flammula vialis Murrill, Mycologia 4: 262. 1912.

Pileus convex to expanded, at length depressed, splitting radially at the margin, wood-loving, 5 cm. broad; surface dry, glabrous, smooth, at length rimose, dark-flavo-luteous with

bay center or the entire surface bay; lamellae adnate, ventricose, broad, rather crowded, citrinous to ferruginous-fulvous; spores ellipsoid, rounded at the ends, smooth, melleous under the microscope, 7 × 3.5 μ; stipe equal or inflated, solid or hollow, citrinous, fibrillose, especially at the top, where a slight trace of the fugacious veil remains, 5 cm. long, 1–1.5 cm. thick.

TYPE LOCALITY: Corvallis, Oregon.
HABITAT: On a railway tie.
DISTRIBUTION: Known only from the type locality.

56. **Gymnopilus subviridis** Murrill; House, Bull. N. Y. State Mus. 179: 33. 1915.

Flammula subviridis Murrill; House, Bull. N. Y. State Mus. 179: 33. 1915.

Pileus convex to nearly plane, circular, 8–10 cm. broad; surface dry, dull-green with a bluish-green bloom, becoming glabrous with age; margin very involute, undulate, not at all appendiculate; context greenish-yellow with an agreeable odor; lamellae deeply emarginate, broad, inserted, distant, brownish-green, uneven on the edges; spores broadly ovoid to subglobose, ferruginous, asperulate, about 5 × 3.5–4 μ; stipe long, slender, flexuous, largest at the middle, concolorous, staining brownish, fleshy-fibrous, greenish within, reaching 10–15 cm. long and 1 cm. thick.

TYPE LOCALITY: Olympia, Washington.
HABITAT: On a decayed fir stump.
DISTRIBUTION: Known only from the type locality.

57. **Gymnopilus permollis** Murrill, Mycologia 4: 252. 1912.

Flammula permollis Murrill, Mycologia 4: 262. 1912.

Pileus convex, not umbonate, solitary, wood-loving, 5–7 cm. broad; surface viscid when young, becoming dry, smooth, glabrous, very soft and pliable to the touch, isabelline; lamellae remotely sinuate-adnate, rather distant, broad, becoming fulvous; spores ovoid, slightly one-sided, obliquely pointed, minutely roughened, melleous under the microscope, with one large nucleus, 11 × 6 μ; stipe equal, longitudinally striate, white, furfuraceous at the apex, fleshy, 5–8 cm. long, 8–10 mm. thick.

TYPE LOCALITY: Seattle, Washington.
HABITAT: On dead wood in a coniferous forest.
DISTRIBUTION: Washington and Oregon.

58. **Gymnopilus echinulisporus** Murrill, Mycologia 4: 255. 1912.

Flammula echinulispora Murrill, Mycologia 4: 262. 1912.

Pileus convex to plane, at length depressed, slightly umbonate when young, wood-loving, reaching 7 cm. broad; surface nearly smooth, moist, glabrous, shining, ferruginous at the center, fulvous on the margin, paler in dry weather, when it is usually darker at the center than on the margin, which is folded or fissured, strongly incurved on drying; lamellae sinuate-adnate with a tooth, broad, slightly ventricose, ferruginous-isabelline to fulvous; spores broadly ovoid to subglobose, conspicuously and densely echinulate, ferruginous under the microscope, 6–9 × 5–6 μ; stipe equal, or enlarged just at the base, longitudinally striate, whitish to isabelline-ferruginous, about 6 cm. long, 1.3–1.6 cm. thick; veil apparently wanting, even in quite young plants.

TYPE LOCALITY: Mill City, Oregon.
HABITAT: On dead wood in woods.
DISTRIBUTION: Oregon.

59. **Gymnopilus subflavidus** Murrill, Mycologia 4: 252. 1912.

Flammula subflavida Murrill, Mycologia 4: 262. 1912.

Pileus thin, conic or convex to expanded, umbonate when young, cespitose, wood-loving, 3–5 cm. broad; surface slimy, glabrous, smooth, melleous with fulvous center, becoming green-spotted when handled, margin entire, strongly incurved; lamellae citrinous to fulvous, sinuate or adnate, of medium breadth and distance; spores ellipsoid, rounded at the ends, smooth,

melleous under the microscope, 7–8 × 3.5–4 μ; stipe equal, cremeous above, pale-fulvous below, smooth, fibrillose, 4–7 cm. long, 5–8 mm. thick; veil slight, citrinous, membranous in young stages, soon breaking into fibrils and leaving no annulus.

TYPE LOCALITY: Seattle, Washington.
HABITAT: On dead stumps and logs in woods.
DISTRIBUTION: Seattle, Washington.

60. **Gymnopilus laeticolor** Murrill, Mycologia 4: 251. 1912.

Flammula laeticolor Murrill, Mycologia 4: 262. 1912.

Pileus convex or somewhat conic to subexpanded, rarely umbonate, thin, cespitose, wood-loving, 3–5 cm. broad; surface smooth, glabrous, slightly viscid, hygrophanous, miniatous when young, becoming testaceous at the center and ochroleucous on the margin in mature plants; context dull-colored, bitterish; lamellae adnate, rather narrow, not crowded, ochraceous; spores ellipsoid, smooth, hyaline with a yellowish tint under the microscope, probably pale-ochraceous in mass, with one or two very brilliant nuclei, 7 × 3–4 μ; stipe equal, miniatous to ochroleucous below, white above, slightly moist and viscid, decorated with a few fibrils, the remains of a slight white veil, about 7 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Seattle, Washington.
HABITAT: Growing from the under side of a much decayed coniferous log in the forest.
DISTRIBUTION: Seattle, Washington.

61. **Gymnopilus latus** Murrill, Mycologia 4: 257. 1912.

Flammula lata Murrill, Mycologia 4: 262. 1912.

Pileus convex to plane, not umbonate, gregarious, wood-loving, reaching 9 cm. broad; surface glabrous, shining, viscid, radiate-lineate, ferruginous-fulvous at the center, ochroleucous on the margin; context rather thin, mild to the taste; lamellae sinuate or adnate, pallid to fulvous, plane, not crowded, rather narrow; spores ellipsoid, rounded at the ends, smooth, melleous under the microscope, 6 × 3.5 μ; stipe equal or slightly larger below, dry, smooth, subglabrous, fleshy, white or somewhat yellowish, with yellow or orange mycelium at the base, 5–7 cm. long, 1–1.3 cm. thick; veil pale-yellow, membranous in young hymenophores, soon breaking into fibrils and disappearing.

TYPE LOCALITY: Seattle, Washington.
HABITAT: On a dead deciduous log in woods.
DISTRIBUTION: Known only from the type locality.

62. **Gymnopilus decoratus** Murrill, Mycologia 4: 251. 1912.

Flammula decorata Murrill, Mycologia 4: 262. 1912.

Pileus convex to slightly depressed, at times umbonate, cespitose, wood-loving, 3.5–5 cm. broad; surface slightly viscid, the center imbricate-scaly with pale-bay scales, chestnut-colored on the umbo, the remainder of the surface cremeous, fading to white toward the margin; lamellae adnate or sinuate, isabelline to fulvous, rather broad but plane, not crowded, the edges undulate; spores ellipsoid or ovoid, smooth, very pale melleous under the microscope, 5–6 × 3.5–4 μ; cystidia abundant, hyaline, conic, tapering to a short, narrow stalk, obtuse at the apex, 30 × 12 μ; stipe equal, rather tough, stuffed, white or yellowish, shaggy-fibrillose, 5–8 cm. long, 5–6 mm. thick; veil fibrillose, evanescent, remaining attached partly to the margin and partly to the stipe.

TYPE LOCALITY: Seattle, Washington.
HABITAT: On dead wood in open ground or in woods.
DISTRIBUTION: Washington and Oregon.

63. **Gymnopilus hypholomoides** Murrill, Mycologia 5: 26. 1913.

Flammula hypholomoides Murrill, Mycologia 5: 36. 1913.

Pileus convex to expanded, 3–6 cm. broad; surface dry, subfibrillose, pale-fuscous, ferruginous at the center, margin thin, somewhat folded and uneven, not striate; context thin, yellowish, of mawkish flavor; lamellae inserted, crowded, rather narrow, sinuate, tawny-

yellow to pale-fuscous; spores ellipsoid, fuscous, 7 × 4 μ; stipe cylindric, curved, concolorous, fibrillose, solid, tough, 4–6 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Rose Hill, Jamaica.
HABITAT: On the ground, apparently attached to buried wood.
DISTRIBUTION: Known only from the type locality.

64. **Gymnopilus jalapensis** Murrill, Mycologia **5**: 25. 1913.

Flammula jalapensis Murrill, Mycologia **5**: 36. 1913.

Pileus expanded, at length depressed at the center, reaching 8 cm. in breadth; surface smooth, moist, glabrous, cremeous at the margin, ochraceous near the center and ferruginous-isabelline to fulvous at the center, slightly greenish when bruised, margin curved downward and irregular or undulate; context white, mild, 5 mm. thick behind; lamellae adnate, crowded, ventricose behind, arcuate near the margin, stramineous, about 5 mm. broad; spores ellipsoid, smooth, subhyaline but with a distinct ferruginous tint, 6 × 3.5 μ; cystidia abundant, flask-shaped, 60–75 × 15 μ, mostly empty and hyaline, with short stalks and long, slender, septate necks filled with yellowish contents; stipe equal below, slightly enlarged at the apex, glabrous, stramineous, with a trace of a slight cortina at the middle, reaching 8 cm. long and 1 cm. thick.

TYPE LOCALITY: Jalapa, Vera Cruz, Mexico.
HABITAT: On the ground in leaf-mold in a dense virgin forest.
DISTRIBUTION: Jalapa, Vera Cruz, Mexico.

65. **Gymnopilus olivaceus** (Pat.) Murrill, Mycologia **5**: 18. 1913.

Flammula olivacea Pat. in Duss, Enum. Champ. Guad. 55. 1903.

Pileus convex, obtuse-mamillate at the center, cespitose, 6–12 mm. broad; surface glabrous, smooth, yellowish-olive; lamellae adnate, crowded, narrow, brown; spores ovoid, smooth, flavo-rufescent, 8 × 5 μ; stipe filiform, central, cylindric, concolorous, 1.5 cm. long.

TYPE LOCALITY: Basse-Terre, Martinique.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

66. **Gymnopilus aureoviridis** (Pat.) Murrill, Mycologia **5**: 19. 1913.

Flammula aureoviridis Pat. in Duss, Enum. Champ. Guad. 55. 1903.

Pileus convex, umbilicate, 15 mm. broad; surface glabrous, smooth, yellowish-orange to greenish; lamellae adnate, crowded, narrow, reddish-brown; spores ochraceous-purple, 6–8 × 5 μ; stipe central, cylindric, flexuous, fibrillose, greenish-yellow, 4–7 cm. long, 1 mm. thick.

TYPE LOCALITY: Camp Jacob, Guadeloupe.
HABITAT: On rotten wood.
DISTRIBUTION: Known only from the type locality.

67. **Gymnopilus chrysotrichoides** Murrill, Mycologia **5**: 21. 1913.

Flammula chrysotrichoides Murrill, Mycologia **5**: 36. 1913.

Pileus thick, fleshy, convex to subexpanded, gregarious, reaching 7 cm. broad; surface dry or moist, not viscid, glabrous, ferruginous to fulvous, margin entire, concolorous, slightly sulcate with age, inflexed on drying; lamellae adnate with a decurrent tooth, broad, crowded, becoming ferruginous or fulvous; spores ellipsoid, punctate-tuberculate, ferruginous, 8–9 × 5–6 μ; stipe cylindric, equal, usually somewhat curved, pallid, glabrous, longitudinally furrowed, at least above, 4–6 cm. long, 3–6 mm. thick, decorated near the apex with the remains of a rather large, membranous, yellowish, usually permanent veil.

TYPE LOCALITY: Managua, Cuba.
HABITAT: On a dead cocoanut log.
DISTRIBUTION: Known only from the type locality.

68. **Gymnopilus helvoliceps** (Berk. & Curt.) Murrill, Mycologia **5**: 20. 1913.

Agaricus helvoliceps Berk. & Curt. Jour. Linn. Soc. **10**: 290. 1868.
Flammula helvoliceps Sacc. Syll. Fung. **5**: 813. 1887.

Pileus thin, convex to depressed, 2.5 cm. broad; surface glabrous, helvolous; lamellae adnate, arcuate, ferruginous-vinous; spores oblong-ellipsoid, smooth or slightly punctate,

ferruginous, 9–12 × 5 μ; stipe equal, fuscous, solid, glabrous, substrigose at the base, 2.5–3 cm. long.

TYPE LOCALITY: Cuba.
HABITAT: On rotten logs in woods.
DISTRIBUTION: Known only from the type locality.

69. **Gymnopilus vinicolor** (Pat.) Murrill, Mycologia **5**: 18. 1913.

Flammula vinicolor Pat. Jour. de Bot. **3**: 339. 1889.

Pileus fleshy, convex to plane, orbicular, deeply umbilicate, cespitose, 1–2 cm. broad; surface smooth, glabrous, red tinged with wine-color when fresh, brownish-yellow when dry; lamellae scarcely decurrent, plane, broad, crowded, yellow; spores ovoid, smooth, ochraceous, 6–7 × 3–4 μ; stipe cylindric, striate, reddish-brown, paler at the apex, rather tough, 3–4 cm. long, 2 mm. thick.

TYPE LOCALITY: Saint Pierre, Martinique.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

70. **Gymnopilus chrysotrichus** (Berk. & Curt.) Murrill, Mycologia **5**: 21. 1913.

Agaricus chrysotrichus Berk. & Curt. Jour. Linn. Soc. **10**: 290. 1868.
Flammula chrysotricha Sacc. Syll. Fung. **5**: 813. 1887.

Pileus fleshy, eccentric, obtuse, 2.5–4 cm. broad; surface pilose with free, depressed hairs, golden-yellow; lamellae adnexed, broad, concolorous; spores subglobose to broadly ellipsoid, finely echinulate, melleous under the microscope, 5–7 × 4 μ; stipe pulverulent-fibrillose, paler than the pileus, enlarged below, 2.5 cm. long, 8 mm. thick.

TYPE LOCALITY: Cuba.
HABITAT: On dead logs in fields.
DISTRIBUTION: Cuba, Guadeloupe, and Martinique.

71. **Gymnopilus chrysopellus** (Berk. & Curt.) Murrill, Mycologia **5**: 23. 1913.

Agaricus chrysopellus Berk. & Curt. Jour. Linn. Soc. **10**: 290. 1868.
Flammula chrysopella Sacc. Syll. Fung. **5**: 813. 1887.

Pileus umbilicate, sometimes depressed, cespitose, 4 cm. broad; surface appressed-tomentose, golden-yellow, margin subsulcate; lamellae decurrent, broad, lurid-golden; spores broadly ellipsoid, often nearly globose, smooth, melleous under the microscope, 6–7 × 4–5 μ; stipe elongate, slender, fuscous, thickened at the base, 8 cm. long, 4–7 mm. thick.

TYPE LOCALITY: Cuba.
HABITAT: On dead wood.
DISTRIBUTION: Known only from the type locality.

72. **Gymnopilus aureobrunneus** (Berk. & Curt.) Murrill, Mycologia **5**: 19. 1913.

Agaricus aureobrunneus Berk. & Curt. Jour. Linn. Soc. **10**: 289. 1868.
Flammula aureobrunnea Sacc. Syll. Fung. **5**: 813. 1887.

Pileus thin, 5 cm. broad; surface appressed-fibrillose, golden-yellow, margin inflexed; lamellae adnate, broad, golden; spores subglobose to broadly ellipsoid, smooth, 5–7 × 3.5–4 μ; stipe solid, pale-fuscous, appressed-pilose, 8 cm. long, 8 mm. thick.

TYPE LOCALITY: Cuba.
HABITAT: On logs and stumps.
DISTRIBUTION: Cuba.

73. **Gymnopilus hispidus** (Massee) Murrill, Mycologia **5**: 24. 1913.

Flammula hispida Massee, Jour. Bot. **30**: 161. 1892.

Pileus fleshy, umbilicate or somewhat infundibuliform, becoming explanate, 2.5 cm. broad; surface dry, smooth, hispid with erect, acute squamules, ochraceous-fulvous; lamellae adnate,

subdecurrent, crowded, broad, golden to fulvous-ferruginous, the edges paler and crenulate; spores ellipsoid, apiculate at the base, ferruginous, 7 × 5 μ; stipe fibrillose, pallid, hollow, attenuate above, 2–2.5 cm. long.

TYPE LOCALITY: Chateau Belair, St. Vincent, West Indies.
HABITAT: On decayed trunks.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Jour. Bot. **30**: *pl. 323, f. 31–33.*

74. **Gymnopilus palmicola** Murrill, Mycologia 5: 23. 1913.

Flammula palmicola Murrill, Mycologia **5**: 36. 1913.

Pileus convex to expanded, at length depressed, cespitose, 2–5 cm. broad; surface dry, floccose-squamose, pale-ferruginous to ochraceous, margin even, not striate; lamellae adnate, subcrowded, broad, at length ventricose, ferruginous at maturity; spores ellipsoid, ferruginous, echinulate-punctate, 10 × 6 μ; stipe cylindric, slightly fibrillose, subconcolorous but paler, solid, fleshy, yellowish within, 3–5 cm. long, 3–5 mm. thick; veil strongly developed, pale-yellowish, subannulate.

TYPE LOCALITY: Cooper's ranch at the base of El Yunque, near Baracoa, Cuba.
HABITAT: On dead logs.
DISTRIBUTION: Known only from the type locality.

75. **Gymnopilus pholiotoides** Murrill, Mycologia **5**: 24. 1913.

Flammula pholiotoides Murrill, Mycologia **5**: 36. 1913.

Pileus firm, fleshy, convex, scattered, 3 cm. broad; surface ochraceous, cracking into scales, margin thin, not striate; context yellowish-white, mild to the taste; lamellae short-decurrent, crowded, of medium width, pale-ochraceous to bright-ferruginous; spores ellipsoid, conspicuously echinulate, ferruginous, 9 × 5 μ; stipe subcylindric, concolorous or paler, slightly fibrillose, solid, 3 cm. long, 5 mm. thick; veil thick, membranous, forming an annulus, at least in young hymenophores.

TYPE LOCALITY: Managua, Cuba.
HABITAT: On a dead royal palm trunk.
DISTRIBUTION: Known only from the type locality.

76. **Gymnopilus parvulus** Murrill, Mycologia **5**: 19. 1913.

Flammula parvula Murrill, Mycologia **5**: 36. 1913.

Pileus convex to nearly plane, subcespitose, reaching 2–4 cm. broad; surface moist but not viscid, flavous-ochraceous when young, becoming somewhat darker with age, decorated with conspicuous, erect, pointed scales or fibrils, which are isabelline to fulvous in color, margin striate, undulate, incurved on drying; context thin, pale-ochraceous, slightly bitter; lamellae narrow, subcrowded, adnate, sometimes with a decurrent tooth, isabelline to ferruginous-fulvous; spores ellipsoid, nearly smooth, ferruginous, 6–7 × 4 μ; stipe stout, concolorous or darker, slightly blackish toward the base, especially on drying, fibrillose, solid, becoming hollow, rather fragile, 2–4 cm. long, 3–5 mm. thick; veil delicate, consisting of yellow fibrils, evanescent.

TYPE LOCALITY: Castleton Gardens, Jamaica.
HABITAT: On dead logs.
DISTRIBUTION: Jamaica.

77. **Gymnopilus hispidellus** Murrill, Mycologia **5**: 24. 1913.

Flammula hispidella Murrill, Mycologia **5**: 36. 1913.

Pileus thin, convex, scattered or subcespitose, 2–4 cm. broad; surface pale-ochraceous. fibrillose, often punctate-squamose with erect, ferruginous scales, margin not striate; context slightly bitter; lamellae adnate, subcrowded, not uniform in breadth, yellow to fuscous-ferruginous; spores ellipsoid, fuscous-ferruginous, strongly punctate, 7 × 5 μ; stipe cylindric, subfibrillose, concolorous with darker base, solid, 2–4 cm. long, 2–4 mm. thick; veil yellowish, subannulate.

TYPE LOCALITY: Cooper's ranch at the base of El Yunque, near Baracoa, Cuba.
HABITAT: On old logs.
DISTRIBUTION: Known only from the type locality.

78. **Gymnopilus bryophilus** Murrill, Mycologia 5: 22. 1913.

Flammula bryophila Murrill, Mycologia 5: 36. 1913.

Pileus convex, obtuse, gregarious, 2–5 cm. broad; surface uniformly ferruginous, dry, densely appressed-fibrillose, margin not striate; lamellae sinuate with a decurrent tooth, crowded, plane, broad, concolorous; spores subglobose, smooth, pale-ferruginous, 6 × 5 μ; stipe cylindric, often eccentric, fibrillose, pale-fuscous, fleshy, solid, yellow within, 2–4 cm. long, 3–4 mm. thick.

TYPE LOCALITY: Port Antonio, Jamaica.
HABITAT: On a decayed mossy log.
DISTRIBUTION: Known only from the type locality.

79. **Gymnopilus subpenetrans** Murrill, Mycologia 5: 20. 1913.

Flammula subpenetrans Murrill, Mycologia 5: 36. 1913.

Pileus broadly convex to expanded, rather thick, 2–4 cm. broad; surface moist, not viscid, slightly fibrillose, ferruginous-orange, margin rather thick, not striate; context whitish, mild but unpleasant to the taste; lamellae sinuate with a long-decurrent tooth, soon separating from the stipe; spores ellipsoid, punctate or nearly smooth, ferruginous, 8–10 × 4–5 μ; stipe slightly tapering downward, concolorous, not paler below, somewhat fibrillose, solid with spongy interior, about 3 cm. long and 3 mm. thick.

TYPE LOCALITY: Managua, Cuba.
HABITAT: On dead wood.
DISTRIBUTION: Cuba and Jamaica.

80. **Gymnopilus Nashii** Murrill, Mycologia 5: 23. 1913.

Flammula Nashii Murrill, Mycologia 5: 36. 1913.

Pileus convex, densely cespitose, 2–4 cm. broad; surface ochraceous, dry, densely floccose, squamose, margin not striate; lamellae adnate, subcrowded, broad, fuscous-ferruginous; spores ellipsoid, smooth, ferruginous, 7–7.5 × 4–5 μ; stipe subcylindric, enlarged at the apex, concolorous, darker below, fibrillose, firm, fleshy, becoming fistulose, 4–7 cm. long, 3–6 mm. thick; veil pale-yellowish, scanty.

TYPE LOCALITY: Port Margot, Haïti.
HABITAT: On old logs.
DISTRIBUTION: Haïti, Santo Domingo, and Cuba.

81. **Gymnopilus Earlei** Murrill, Mycologia 5: 22. 1913.

Flammula Earlei Murrill, Mycologia 5: 36. 1913.

Pileus rather thick, tough, convex to expanded, cespitose, 3–6 cm. broad; surface dry, fibrillose and floccose-squamose, pale-ferruginous, margin uneven, somewhat fluted, not striate; context mild to the taste, said to be edible when young; lamellae adnate or subdecurrent, rather broad, subcrowded, ferruginous, darker than the surface of the pileus; spores ellipsoid, ferruginous, conspicuously punctate, 7–8 × 4–5 μ; stipe cylindric, densely ferruginous-fibrillose, subconcolorous, solid, tough, horny, nearly black within, 4–6 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Port Antonio, Jamaica.
HABITAT: On cocoanut logs.
DISTRIBUTION: Port Antonio, Jamaica.

82. **Gymnopilus depressus** Murrill, Mycologia 5: 20. 1913.

Flammula depressa Murrill, Mycologia 5: 36. 1913.

Pileus convex to deeply depressed, gregarious or cespitose, reaching 8–10 cm. broad; surface dry, densely floccose-scaly, becoming subglabrous, dull-yellowish, at length dull-rusty-brown, margin not striate, strongly inflexed on drying; lamellae short-decurrent, subdistant, broad, yellow to ferruginous; spores ellipsoid, minutely punctate, ferruginous, 7 × 4 μ; stipe subcylindric, slightly enlarged at the apex and base, slightly paler than the pileus, yellowish above, minutely scaly-fibrillose throughout, fleshy, yellow within, solid when young, becoming

fistulose with age, 4–8 cm. long, 6–10 mm. thick; veil delicate, consisting of yellow fibrils, evanescent.

TYPE LOCALITY: Hope Gardens, Jamaica.
HABITAT: On a dead log.
DISTRIBUTION: Known only from the type locality.

83. **Gymnopilus tenuis** Murrill, Mycologia 5: 22. 1913.

Flammula tenuis Murrill, Mycologia 5: 36. 1913.

Pileus rather thin, convex to expanded, obtuse, cespitose, 6–10 cm. broad; surface pale-yellow to ferruginous, dry, fibrillose to floccose-scaly, at length subglabrous, margin thin, not striate, often uneven and undulate; lamellae decurrent, crowded, narrow, yellow to ferruginous; spores ellipsoid, ferruginous, minutely punctate, 7 × 4 μ; stipe cylindric, slightly fibrillose, ferruginous-brown, often whitish at the base, hollow, the rind becoming hard and horny on drying, 4–6 cm. long, 5–8 mm. thick; veil of bright-yellow fibers, soon vanishing.

TYPE LOCALITY: Port Antonio, Jamaica.
HABITAT: On dead wood.
DISTRIBUTION: Jamaica, Cuba, and the Bahamas.

84. **Gymnopilus areolatus** Murrill, Mycologia 5: 24. 1913.

Flammula areolata Murrill, Mycologia 5: 36. 1913.

Pileus thick, fleshy, convex, cespitose, 6–7 cm. broad; surface dry, imbricate-scaly, dirty-orange-yellow, margin entire; context yellowish-white, slightly bitter; lamellae adnate, separating from the stipe, subcrowded, broad, ventricose, often notched, yellowish-ferruginous; spores ellipsoid, ferruginous, tuberculate, 9–11 × 6–7 μ; stipe cylindric, often curved, concolorous or paler, subglabrous, solid, 3–5 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Santiago de las Vegas, Cuba.
HABITAT: On stumps.
DISTRIBUTION: Cuba.

85. **Gymnopilus lateritius** (Pat.) Murrill, Mycologia 5: 19. 1913.

Flammula lateritia Pat. Bull. Soc. Myc. Fr. 16: 176. 1900.

Pileus convex, slightly umbonate, thin, 2–5 cm. broad; surface dark-brick-colored, punctate toward the center with erect, distant, brown scales, margin not striate, sinuous; lamellae adnate, somewhat decurrent, distant, broad, red-brick-colored; spores ovoid, verrucose, reddish-brown, 8–10 × 5–6 μ; stipe tough, slender, cylindric, equal, glabrous, brownish-red, 3–4 cm. long.

TYPE LOCALITY: Pointe-Noire, Guadeloupe.
HABITAT: On dead wood.
DISTRIBUTION: Guadeloupe and Martinique.

DOUBTFUL AND EXCLUDED SPECIES

Flammula anepsia (Mont.) Sacc. Syll. Fung. 5: 812. 1887. (*Agaricus anepsius* Mont. Syll. Crypt. 118. 1856.) When examining the type of this species at Paris, I remarked that it was about the shape of *G. carbonarius* and was probably that species. The spores, however, are described as 10 μ long, while those of *G. carbonarius* are usually somewhat smaller.

Flammula Braendlei Peck, Bull. Torrey Club 31: 180. 1904. Described from Washington, D. C. This species is to be carefully compared with *G. pulchrifolia* and *Pholiota aeruginosa*.

Flammula flavida (Schaeff.) Quél. Champ. Jura Vosg. 98. 1872. (*Agaricus flavidus* Schaeff. Fung. Bavar. 4: Ind. 17. 1774.) Reported from many parts of the United States, but the specimens I have seen so named do not at all correspond with the original figures by Schaeffer or with specimens sent from Sweden by Romell. See *G. flavidellus*.

Flammula fusa (Batsch) Gill. Champ. Fr. 535. 1876. (*Agaricus fusus* Batsch, Elench. Fung. Contin. 2: 13. 1789.) Reported from Iowa by Macbride and from Ohio by Hard. Specimens so named by Hard are to be found at Albany. They appear quite distinct, but I have not been able to compare them with specimens just received from Romell.

Flammula inopoda (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 407. 1879. (*Agaricus inopus* Fries, Obs. Myc. **2**: 32. 1818.) Reported from North Carolina, but I find nothing in America to correspond to specimens from Bresadola.

Flammula lubrica (Pers.) Quél. Champ. Jura Vosg. 232. 1872. (*Agaricus lubricus* Pers. Syn. Fung. 307. 1801. Not *A. lubricus* Scop. 1772.) Reported from New York by Peck, but his specimens do not appear to have been correctly determined.

Flammula mixta (Fries) P. Karst. Bidr. Finl. Nat. Folk **32**: 403. 1879. (*Agaricus mixtus* Fries, Epicr. Myc. 185. 1838.) Reported by Kauffman from the Adirondacks. I have not seen his specimens, but find nothing at Albany to match specimens from Bresadola.

Flammula peregrina (Fries) Sacc. Syll. Fung. **5**: 814. 1887. (*Agaricus peregrinus* Fries, Elench. Fung. **1**: 31. 1828.) Collected by Benzon on trunks in Santa Cruz, West Indies. Types not found.

Flammula picrea (Pers.) Gill. Champ. Fr. 533. 1876. (*Agaricus picreus* Pers. Ic. Descr. Fung. 14. 1798.) Reported from Greenland and from North Carolina. I have seen no American material that corresponds with specimens from Romell.

Flammula ricensis (Fries) Sacc. Syll. Fung. **5**: 814. 1887. (*Agaricus ricensis* Fries, Nova Acta Soc. Sci. Upsal. III. **1**: 24. 1851.) Collected by Oersted on the ground in Costa Rica. It was not figured, but a number of specimens were preserved, none of which could be found either at Upsala or Copenhagen. It differs from most tropical species of the genus in being terrestrial.

Flammula sapinea (Fries) Quél. Champ. Jura Vosg. 98. 1872. (*Agaricus sapineus* Fries, Syst. Myc. **1**: 239. 1821.) Reported from most of North America, but confused with *G. penetrans*, which seems to account for all the American material examined.

Gymnopilus viridans Murrill, Mycologia **4**: 257. 1912. (*Flammula viridans* Murrill, Mycologia **4**: 262. 1912.) Described from specimens collected near Seattle, Washington. See *Pholiota aeruginosa* and *P. aegerita*.

72. HEBELOMA (Fries) Quél. Champ. Jura Vosg. 95. 1872.

Agaricus § *Hebeloma* Fries, Epicr. Myc. 170. 1838.
Roumegueria P. Karst. Bidr. Finl. Nat. Folk **32**: 452. 1879.
Hylophila Quél. Ench. Fung. 98. 1886.
Hebelomatis Earle, Bull. N. Y. Bot. Gard. **5**: 430. 1909.
Picromyces (Batt.) Earle, Bull. N. Y. Bot. Gard. **5**: 438. 1909.

Pileus fleshy, putrescent, solitary or gregarious, usually thick, viscid, glabrous, somewhat fibrillose or squamulose in a few species; lamellae sinuate or adnexed, usually clay-colored; spores smooth, ochraceous; stipe central, fleshy, rarely fibrous, usually stout, whitened at the apex; veil when present very slight and soon evanescent.

Type species, *Hebeloma mesophaeum* (Pers.) Quél.

I. SPECIES OCCURRING IN TEMPERATE NORTH AMERICA, EXCEPT THOSE CONFINED TO THE PACIFIC COAST

Pileus 1–2.5 cm. broad.
- Pileus uniformly white. — 1. *H. sarcophyllum.*
- Pileus whitish, blackish-brown on the disk. — 2. *H. fuscodiscum.*
- Pileus uniformly pale-yellowish.
  - Stipe 1–2 mm. thick. — 3. *H. fragilius.*
  - Stipe 2–4 mm. thick. — 4. *H. excedens.*
- Pileus pale-yellowish-brown, sometimes darker on the disk. — 5. *H. gregariiforme.*
- Pileus gray or clay-colored, brownish on the disk; stipe 2.5–3.5 cm. long. — 6. *H. Sterlingii.*
- Pileus grayish-rosy-isabelline, bay on the disk; stipe 5–6 cm. long. — 7. *H. paludicola.*

Pileus 2.5–5 cm. broad.
- Pileus uniformly white, grayish-white, or yellowish-white.
  - Stipe about 3 cm. long.
    - Species occurring among short grass in pastures. — 8. *H. sociale.*
    - Species occurring on the ground in woods. — 9. *H. vatricosum.*
  - Stipe 3–7 cm. long.
    - Stipe 3 mm. thick. — 10. *H. kalmicola.*
    - Stipe 4–6 mm. thick.
      - Spores 10–12 μ long. — 11. *H. albidulum.*
      - Spores 12–16 μ long. — 12. *H. album.*
- Pileus whitish, often reddish at the center. — 13. *H. vatricosoides.*
- Pileus uniformly ochraceous-isabelline; stipe reaching 4 cm. long. — 14. *H. praecox.*

Pileus uniformly dingy-buff or clay-brown; stipe reaching 7.5 cm. long. 15. *H. flexuosipes.*
Pileus rosy-isabelline, darker or cremeous on the disk.
  Stipe 3–5 mm. thick. 16. *H. Earlei.*
  Stipe 10 mm. thick. 17. *H. appendiculatum.*
Pileus some shade of isabelline, yellowish-brown, or fulvous, darker and differently colored on the disk.
  Stipe 2–4 mm. thick.
    Stipe 3–5 cm. long.
      Spores 6.5–8.5 μ long. 18. *H. Tottenii.*
      Spores 10–11 μ long. 19. *H. gregarium.*
    Stipe 5–7 cm. long. 20. *H. mesophaeum.*
  Stipe 4–6 mm. thick.
    Spores 7–8 μ long. 21. *H. alabamense.*
    Spores 10 μ long. 22. *H. pascuense.*
  Stipe 8 mm. thick. 23. *H. exiguifolium.*
Pileus uniformly chestnut-colored, reddish-gray, pale-ochraceous, or grayish. 24. *H. velatum.*
  Pileus grayish-brown when moist, paler when dry; stipe 5–7 cm. long, 4–8 mm. thick. 25. *H. palustre.*
  Pileus dark-brown when moist, paler when dry; stipe 3.5–5 cm. long, 4 mm. thick. 26. *H. illicitum.*
  Pileus brownish-red or tawny-brown; stipe 2.5 cm. long, 3–4 mm. thick. 27. *H. sordidulum.*
  Pileus reddish-brown or chestnut; stipe 4–6 cm. long, 2–4 mm. thick. 28. *H. discomorbidum.*
Pileus 5–10 cm. or more broad.
  Pileus bright-yellow.
    Pileus glabrous. 29. *H. luteum.*
    Pileus clothed with concentric, brown scales. 30. *H. flavum.*
  Pileus not bright-yellow.
    Stipe 2–6 mm. thick.
      Spores 10–12 × 5–6 μ. 31. *H. Colvini.*
      Spores 12–15 × 7–8 μ. 32. *H. neurophyllum.*
    Stipe 6–10 mm. thick.
      Spores 6–7 × 4–5 μ.
        Stipe dingy-white. 33. *H. commune.*
        Stipe ferruginous or brownish below. 34. *H. parvifructum.*
      Spores 10–12 × 5–7 μ. 35. *H. crustuliniforme.*
    Stipe 25 mm. thick. 36. *H. sinapizans.*

II. SPECIES OCCURRING ON THE PACIFIC COAST

Pileus aeruginous. 37. *H. aeruginosum.*
Pileus pale-olive-brown. 38. *H. sericipes.*
Pileus latericious. 39. *H. lateritium.*
Pileus some shade of yellow, yellowish-brown, or reddish-brown.
  Pileus 1.5–2.5 cm. broad. 40. *H. dryophilum.*
  Pileus 4–5 cm. broad. 41. *H. Harperi.*
  Pileus 5–7 cm. broad.
    Lamellae pale-ochraceous-brown. 42. *H. Bakeri.*
    Lamellae darker-brown. 43. *H. cremeum.*
  Pileus 7–10 cm. or more broad.
    Pileus cream-colored.
      Pileus broadly umbonate. 44. *H. californicum.*
      Pileus not umbonate. 45. *H. farinaceum.*
    Pileus isabelline. 36. *H. sinapizans.*

III. SPECIES CONFINED TO TROPICAL NORTH AMERICA

Pileus white or pale-isabelline.
  Stipe 2–4 mm. thick. 46. *H. Broadwayi.*
  Stipe 7–10 mm. thick. 47. *H. cinchonense.*
Pileus pale-testaceous, scarcely 1 cm. broad. 48. *H. subtestaceum.*
Pileus incarnate-isabelline, 2–2.5 cm. broad. 49. *H. subincarnatum.*
Pileus chestnut-brown. 50. *H. cubense.*

1. **Hebeloma sarcophyllum** (Peck) Sacc. Syll. Fung. **5**: 804. 1887.

Agaricus sarcophyllus Peck, Ann. Rep. N. Y. State Cab. **23**: 96. 1872.

Pileus fleshy, obtusely conic or convex, 1.5–2.5 cm. broad; surface glabrous, white; context white, the taste bitterish; lamellae subcrowded, adnexed, deeply sinuate, dingy-flesh-colored; spores dark-ferruginous, subellipsoid, 8–10 × 5–6 μ; stipe equal, firm, stuffed, mealy or minutely squamulose at the apex, white, 2.5–4 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Greenbush, New York.
HABITAT: On wet, grassy ground.
DISTRIBUTION: New York.
ILLUSTRATIONS: Ann. Rep. N. Y. State Cab. **23**: *pl. 1, f. 7–11.*

2. **Hebeloma fuscodiscum** (Peck) Sacc. Syll. Fung. **5**: 796. 1887.

Agaricus fuscodiscus Peck, Ann. Rep. N. Y. State Mus. **27**: 95. 1875.
Inocybe fuscodisca Massee, Ann. Bot. **18**: 487. 1904.

Pileus conic to campanulate or expanded, umbonate, 1–2.5 cm. broad; surface subviscid, whitish, blackish-brown on the disk, with blackish-brown fibrils; context having the odor of chestnut flowers; lamellae crowded, white to brown, roughened on the edges; spores pip-shaped, smooth, 8–10 × 5–5.5 μ; cystidia ventricose, fairly numerous, 45–55 × 12–16 μ; stipe equal, solid, white and pruinose at the apex, brown and fibrillose below, 2.5–8 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Forestburgh, New York.
HABITAT: In pastures under trees.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **27**: *pl. 1, f. 3–6.*

3. **Hebeloma fragilius** (Peck) Sacc. Syll. Fung. **5**: 798. 1887.

Agaricus fragilior Peck, Ann. Rep. N. Y. State Mus. **27**: 95. 1875.

Pileus thin, fragile, convex, becoming plane or centrally depressed, about 1 cm. broad; surface minutely squamulose when young, soon glabrous, pale-grayish-ochraceous, margin sometimes irregular or wavy; lamellae subdistant, ventricose, adnexed, whitish and crenulate on the edges, subochraceous; spores ellipsoid, 6 × 4 μ; stipe slender, equal, hollow, minutely furfuraceous, becoming glabrous, concolorous, about 2.5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Indian Lake, New York.
HABITAT: On damp, decaying leaves in water holes in swamps.
DISTRIBUTION: Known only from the type locality.

4. **Hebeloma excedens** (Peck) Sacc. Syll. Fung. **5**: 806. 1887.

Agaricus excedens Peck, Ann. Rep. N. Y. State Mus. **24**: 68. 1872.

Pileus thin, convex, obtuse or broadly umbonate, 1–2.5 cm. broad; surface glabrous, pale-alutaceous, margin projecting; context having the odor and taste of radishes; lamellae crowded, deeply sinuate, adnexed, moderately broad, minutely eroded on the edges, pallid, becoming brownish-ferruginous; spores subellipsoid, 10–12 × 6–7 μ; stipe equal, solid, silky-fibrillose, concolorous, 3–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Saratoga, New York.
HABITAT: On sandy soil under or near pine trees.
DISTRIBUTION: Known only from the type locality.

5. **Hebeloma gregariiforme** Murrill, sp. nov.

Pileus convex to expanded, rather thin, gregarious, 2–2.5 cm. broad; surface smooth, glabrous, viscid, pale-yellowish-brown, sometimes slightly darker on the disk, margin entire, concolorous; lamellae adnate or slightly sinuate, subcrowded, many times inserted, rather narrow, creamy-white, becoming pale-dingy-yellowish-brown; spores ovoid, smooth, melleous under the microscope, 8–9 × 5–6 μ; stipe slender, concolorous, smooth, glabrous, about 5 cm. long and 3 mm. thick; veil slight, arachnoid, evanescent.

Type collected on the ground in pine woods at Auburn, Alabama, December 26, 1899, *F. S. Earle* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

6. **Hebeloma Sterlingii** (Peck) Murrill.

Inocybe Sterlingii Peck, Bull. Torrey Club **33**: 217. 1906.

Pileus fleshy, convex to nearly plane, solitary or gregarious, 1.5–2.5 cm. broad; surface glabrous, slightly viscid at the center when moist, gray or clay-colored, the center brownish, margin obscurely fibrillose, incurved, subappendiculate; context having a farinaceous taste, edible; lamellae adnexed, crowded, thin, pallid, becoming cinnamon; spores ellipsoid, smooth, usually uniguttulate, 10–12 × 6–8 μ; stipe equal or slightly thickened at the base, floccose-fibrillose, white, bay-red within, solid, 2.5–3.5 cm. long, 2–4 mm. thick; veil fibrillose or webby, forming an evanescent annulus.

TYPE LOCALITY: Trenton, New Jersey.
HABITAT: Under spruce trees.
DISTRIBUTION: Known only from the type locality.

7. **Hebeloma paludicola** Murrill, sp. nov.

Pileus small, thin, convex to expanded, gregarious, 1–2 cm. broad; surface viscid, smooth, glabrous, grayish-rosy-isabelline, bay on the disk in mature specimens and over most of the surface in young stages, margin entire, concolorous; lamellae sinuate, ventricose, subdistant, pallid to clay-colored; spores ovoid, smooth, melleous, tapering toward the apex, obliquely apiculate at the base, 9–10 × 6 μ; stipe long, slender, equal, white, whitish-fibrillose from the remains of the slight, evanescent veil, much twisted in dried specimens, 5–6 cm. long, 3–4 mm. thick.

Type collected among sphagnum in marshy ground at Lake Placid, Adirondack Mountains, New York, October 3–14, 1912, *W. A. & Edna L. Murrill 776* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

8. **Hebeloma sociale** Peck, Bull. N. Y. State Mus. **75**: 15. 1904.

Pileus fleshy but thin, convex, becoming plane or nearly so, gregarious or subcespitose, 3 cm. broad; surface glabrous, slightly viscid when moist, yellowish-white; context yellowish-white, the taste nauseous; lamellae thin, crowded, adnexed, whitish, becoming yellowish, and finally brownish-ferruginous; spores ellipsoid, brownish-ferruginous, 6–8 × 4–5 μ; stipe short, fibrous, floccose-fibrillose, hollow, white, 2.5–3.5 cm. long, 3–6 mm. thick.

TYPE LOCALITY: Menands, New York.
HABITAT: Among short grass in pastures.
DISTRIBUTION: Known only from the type locality.

9. **Hebeloma vatricosum** (Fries) Murrill.

Agaricus vatricosus Fries, Obs. Myc. **2**: 46. 1818.
Inocybe vatricosa Quél. Ench. Fung. 98. 1886.

Pileus subfleshy, convex to plane, subumbonate, gregarious or subcespitose, 3 cm. broad; surface glabrous, viscid, whitish or argillaceous-white, margin silky; context thin, watery, without odor; lamellae emarginate, ventricose, white to brownish; spores ellipsoid, smooth, 8–9 × 5 μ (Kauffman), 5–6 × 3–3.5 μ (Massee); stipe contorted, curved, subconcolorous, hollow, pulverulent, white-squamulose at the apex, 3 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Sweden.
HABITAT: On the ground in woods.
DISTRIBUTION: Eastern United States; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 403b (443)*; Fries, Ic. Hymen. *pl. 110, f. 3.*

10. **Hebeloma kalmicola** Murrill, sp. nov.

Pileus convex, not fully expanding, slightly depressed at the center with age, not umbonate, gregarious, 2.5–3.5 cm. broad; surface moist, subglabrous, uniformly yellowish-white to cream-colored, margin entire, concolorous, not striate; context thin, with slightly unpleasant taste and no odor; lamellae adnexed or sinuate, very broad, of medium distance, thin, yellowish-white to dirty-white, entire and concolorous on the edges; spores ellipsoid, smooth, pale-yellow, uniguttulate, about 12 × 7 μ; stipe slender, cylindric, equal, fibrillose, slightly darker than the pileus, hollow, 5 cm. long, 3 mm. thick.

Type collected on a much decayed mossy stump of *Kalmia latifolia* on Apple Orchard Mountain, near Bedford, Virginia, October 24–27, 1916, *W. A. Murrill* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

11. **Hebeloma albidulum** Peck, Ann. Rep. N. Y. State Mus. **54**: 148. 1901.

Pileus fleshy, firm, broadly convex or nearly plane, 2.5–5 cm. broad; surface glabrous, slightly viscid when moist, dingy-white or grayish-white; context white; lamellae crowded, narrow, adnexed, whitish, becoming brownish-ferruginous, white and minutely denticulate on the edges; spores subellipsoid, obtuse, 10–12 × 6–8 μ; stipe equal, firm, glabrous, slightly mealy or pruinose at the apex, hollow, sometimes slightly bulbous, concolorous, 3–6 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Westport, New York.
HABITAT: Among fallen leaves in woods.
DISTRIBUTION: New York.

12. **Hebeloma album** Peck, Ann. Rep. N. Y. State Mus. 54: 147. 1901.

Pileus fleshy, firm, convex, becoming nearly plane or concave, gregarious, 2.5–5 cm. broad; surface glabrous, subviscid, white or yellowish-white, margin curving upward; context white; lamellae thin, narrow, crowded, sinuate-adnexed, whitish, becoming cinnamon or rust-colored when mature; spores subellipsoid, pointed at one or both ends, 12–16 × 6–8 μ; stipe equal, firm, rather long, solid or stuffed, slightly mealy at the apex, white, 3.5–7 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Westport, New York.
HABITAT: On the ground among fallen leaves in woods.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. 54: *pl. G, f. 1–7;* Bull. N. Y. State Mus. 139: *pl. 117, f. 1–6.*

13. **Hebeloma vatricosoides** (Peck) Murrill.

Inocybe vatricosoides Peck, Bull. N. Y. State Mus. 139: 67. 1910.

Pileus thin, convex, becoming nearly plane, obtuse or subumbonate, 2.5–4 cm. broad; surface slightly viscid when moist, whitish, often reddish at the center, margin fibrillose from the abundant, whitish, webby veil; context whitish, the odor like that of radishes; lamellae crowded, broadly sinuate, adnate with a decurrent tooth, whitish, becoming brownish-ferruginous, white and crenulate on the edges; spores ellipsoid, smooth, 10–12 × 6–8 μ; stipe equal, flexuous, usually curved at the base, stuffed or hollow, silky-fibrillose, whitish or grayish, sometimes with whitish, floccose scales toward the base, 2.5–5 cm. long, 2–6 mm. thick.

TYPE LOCALITY: Ulster County, New York.
HABITAT: On damp soil under trees.
DISTRIBUTION: Maine to New Jersey in the eastern United States.

14. **Hebeloma praecox** Murrill, Mycologia 3: 166. 1911.

Pileus convex to expanded, slightly umbonate, gregarious, 4–5 cm. broad; surface dry, glabrous, opaque, smooth, ochraceous-isabelline; margin incurved, entire or undulate, showing no trace of a veil; context white, sweet, odor pleasant; lamellae sinuate, arcuate, crowded, many times inserted, pallid when young, fulvous at maturity; spores ovoid, smooth, pale-ochraceous, not conspicuously nucleate, 5–6 × 3–4 μ; stipe fleshy, brittle, subequal, stuffed to hollow, finely scabrous, sometimes rough, cremeous, 3–4 cm. long, 5–8 mm. thick.

TYPE LOCALITY: New York Botanical Garden.
HABITAT: Among mosses on shady banks.
DISTRIBUTION: Southern New York.
ILLUSTRATION: Mycologia 3: *pl. 49, f. 2.*

15. **Hebeloma flexuosipes** Peck, Bull. N. Y. State Mus. 150: 55. 1911.

Pileus thin, convex, 2.5–5 cm. broad; surface glabrous, slightly viscid when moist, dingy-buff or clay-brown; context white; lamellae crowded, adnate, brownish-ferruginous; spores subellipsoid, brownish-ferruginous, 12–16 × 7–9 μ; stipe equal or slightly thickened at the base, fibrous, flexuous, solid or stuffed, pruinose-pubescent and minutely glandular at the apex, pallid or similar to the pileus in color, with an abundant, white, fibrillose mycelium at the base, 3.5–7.5 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Schenley Park, Pittsburgh, Pennsylvania.
HABITAT: On the ground.
DISTRIBUTION: Known only from the type locality.

16. **Hebeloma Earlei** Murrill, sp. nov.

Pileus convex to plane, solitary or somewhat gregarious, 3–4 cm. broad; surface slightly viscid, smooth, glabrous, rosy-isabelline, somewhat darker on the disk, margin pallid, not striate, silky; context thin, whitish, with mild taste and pleasant odor; lamellae deeply sinuate, subcrowded, rather broad, pallid to subfulvous; spores ovoid, obliquely apiculate at the base,

very pale melleous under the microscope, smooth, 9–10 × 6 μ; stipe equal, glabrous, shining, minutely floccose above, white, solid, 3–4 cm. long, 3–5 mm. thick.

Type collected in soil under beech trees in the New York Botanical Garden, November 12, 1901, *F. S. Earle 51* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

17. **Hebeloma appendiculatum** Murrill, sp. nov.

Pileus convex, not fully expanding, slightly gibbous, rather thick and fleshy, cespitose, 5 cm. broad; surface viscid, silky and also finely imbricate-squamulose, rosy-isabelline, cremeous on the disk, margin deflexed, concolorous, appendiculate with triangular fragments of the slight, evanescent veil; context white, thick at the center, with nutty flavor; lamellae sinuate, broad behind and tapering in front, quite narrow, arcuate, very much crowded, pale-cream-colored, not darkening on drying, the edges pallid and distinctly crenate or dentate; spores ellipsoid, smooth, pale-clay-colored in mass, pale-melleous under the microscope, 6–7 × 3–4 μ; stipe equal, spongy-stuffed with creamy-white pith, glabrous at the apex, white above, concolorous below, revolute-squamulose, 4 cm. long, 1 cm. thick.

Type collected on the ground at the base of a sugar maple tree on a lawn in the New York Botanical Garden, September 4, 1912, *W. A. Murrill* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

18. **Hebeloma Tottenii** Murrill, sp. nov.

Pileus convex to plane, usually becoming depressed, often slightly umbonate, gregarious or cespitose, 2.5–4 cm. broad; surface smooth, glabrous, shining, reddish-tawny at the center and shading to whitish-buff on the margin; context thin, pale-buff, without characteristic taste or odor; lamellae sinuate, broad, not crowded, melleous to fulvous or brown; spores ellipsoid, smooth, fulvous in mass, 6.5–8.5 × 4–5 μ; stipe slightly tapering downward, smooth, hollow, whitish-buff above, reddish-tawny below, sometimes decorated near the base with long, coarse, white hairs, 3–4 cm. long, 2–3 mm. thick.

Type collected on the ground under pines near Chapel Hill, North Carolina, December 10, 1914, *H. R. Totten 1509* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

19. **Hebeloma gregarium** Peck, Ann. Rep. N. Y. State Mus. **49**: 32 (18). 1897.

Pileus thin, hemispheric or convex, obtuse or rarely with a small, inconspicuous umbo, gregarious, 2.5–3.5 cm. broad; surface slightly viscid when moist, glabrous or slightly silky on the margin, pale-ochraceous, sometimes with a reddish or tawny tint at the center; context whitish; lamellae thin, crowded, adnate, whitish, becoming subcinnamon-colored; spores ellipsoid, 10–11 × 5–6 μ; stipe slender, stuffed or hollow, fibrillose, whitish, slightly mealy or pruinose at the apex, 3–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Delmar, New York.
HABITAT: On sandy soil in heathy places.
DISTRIBUTION: New York and Michigan.

20. **Hebeloma mesophaeum** (Pers.) Quél. Champ. Jura Vosg. 95. 1872.

Agaricus fastibilis mesophaeus Pers. Myc. Eur. **3**: 173. 1828.
Agaricus mesophaeus Fries, Epicr. Myc. 179. 1838.

Pileus somewhat fleshy, conic-convex to plane, 3–4 cm. broad; surface viscid, isabelline, bay or umbrinous on the disk, margin even, almost naked; lamellae emarginate, crowded, thin, entire; spores 8–10 × 5–6 μ; stipe tough, slender, equal, fibrillose, pruinose at the apex, whitish, becoming rusty, subfistulose, 5–7 cm. long, 4 mm. thick; veil fugacious.

TYPE LOCALITY: Europe.
HABITAT: On the ground in woods or groves.
DISTRIBUTION: Canada to Alabama in eastern North America; also in Europe.
ILLUSTRATIONS: Cooke, Brit. Fungi *pl. 411* (*452*), *412* (*453*).
EXSICCATI: Barth. Fungi Columb. *1930;* Ellis & Ev. N. Am. Fungi *1908* (as *H. versipelle*).

21. **Hebeloma alabamense** Murrill, sp. nov.

Pileus thin, rather fragile, expanded, solitary, 3 cm. broad; surface subviscid, glabrous, bright-yellowish-brown, darker and reddish-brown on the disk, margin thin, not striate, crenulate or wavy; lamellae sinuate-adnate, broad behind, subdistant, thin, ferruginous-cinnamon; spores broadly ellipsoid, 7–8 × 5–6 μ; stipe cylindric, slightly silky-fibrillose, whitish, hollow, fragile, 5–6 cm. long, 4–5 mm. thick.

Type collected on the ground in rich woods at Auburn, Alabama, October 12, 1900, *F. S. Earle* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

22. **Hebeloma pascuense** Peck, Ann. Rep. N. Y. State Mus. **53**: 844. 1900.

Pileus thin, convex, becoming nearly plane, gregarious or subcespitose, 2.5–5 cm. broad; surface viscid when moist, obscurely innately fibrillose, brownish-clay-colored, often darker or rufescent at the center, margin often whitened by the thin webby veil when young; context whitish, the odor similar to that of radishes; lamellae crowded, adnexed, whitish, becoming pale-ochraceous; spores subellipsoid, pale-ochraceous, uninucleate, 10 × 6 μ; stipe firm, equal, solid, fibrillose, slightly mealy at the apex, whitish or pallid, 2.5–5 cm. long, 4–6 mm. thick.

TYPE LOCALITY: Warrensburg, New York.
HABITAT: In stony pastures.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **53**: *pl. C, f. 21–27.*

23. **Hebeloma exiguifolium** Murrill, sp. nov.

Pileus convex to expanded or slightly depressed, broadly umbonate, gregarious to subcespitose, 3–5 cm. broad; surface smooth, glabrous, viscid, isabelline to fulvous, usually darker on the umbo, margin entire, pallid; context thick at the center, very thin at the margin, white, the taste becoming somewhat bitterish; lamellae sinuate, crowded, extremely narrow, isabelline to fulvous, whitish-pruinose on the edges; spores ovoid, smooth, melleous under the microscope, obliquely apiculate at the base, 8–9 × 6 μ; stipe subequal, usually abruptly enlarged at the base, white or pale-yellowish, fibrillose, solid, white within, 5 cm. long, about 8 mm. thick.

Type collected on the ground in woods at Pittsford, New York, September 28, 1915, *Fred S. Boughton* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

24. **Hebeloma velatum** Peck, Bull. N. Y. State Mus. 139: 69. 1910.

Hebeloma Colvini velatum Peck, Ann. Rep. N. Y. State Mus. **48**: 19. 1897.

Pileus convex, plane or slightly centrally depressed, obtuse or umbonate, gregarious or cespitose, 2.5–5 cm. broad; surface slightly viscid when moist, glabrous or slightly silky from the veil, chestnut-colored, reddish-gray, pale-ochraceous, or grayish, margin silky or floccosely-scaly or appendiculate with the fragments of the veil; lamellae crowded, ventricose, adnexed, whitish, becoming pale-cinnamon, whitish and often crenulate on the edges; spores subellipsoid, 10–12 × 6–8 μ; stipe equal, hollow, silky-fibrillose, sometimes floccosely-squamulose toward the base, often more or less annulate, whitish, 3.5–6 cm. long, 4–6 mm. thick; veil rupturing and disappearing with age or persisting on the margin and stipe, soft, cottony, whitish or grayish.

TYPE LOCALITY: Rouses Point, Clinton County, New York.
HABITAT: In gravelly soil under cottonwood trees.
DISTRIBUTION: New York.

25. **Hebeloma palustre** Peck, Bull. N. Y. State Mus. **5**: 649. 1899.

Pileus thin, broadly convex, becoming nearly plane, sometimes wavy or irregular, 2.5–3.5 cm. broad; surface glabrous, hygrophanous, grayish-brown when moist, paler when dry, margin slightly striatulate when moist; context whitish; lamellae crowded, thin, ventricose,

adnexed, grayish-white, becoming brownish-cinnamon; spores subellipsoid, uninucleate, 10–12 × 6–8 μ; stipe equal or tapering upward, hollow, silky, white, 5–7 cm. long, 4–8 mm. thick.

TYPE LOCALITY: Kasoag, New York.
HABITAT: On mossy ground in swampy woods.
DISTRIBUTION: Known only from the type locality.

26. **Hebeloma illicitum** (Peck) Sacc. Syll. Fung. **5**: 806. 1887.

Agaricus illicitus Peck, Ann. Rep. N. Y. State Mus. **24**: 68. 1872.

Pileus fleshy, firm, convex or expanded, obtuse, gregarious or cespitose, 2.5–3.5 cm. broad; surface glabrous, hygrophanous, dark-brown when moist, paler when dry; lamellae crowded, broad, ventricose, adnexed, pale-brown; spores subellipsoid, 8–10 × 4–5 μ; stipe equal, firm, hollow, concolorous but paler, striate at the apex, with a white mycelium at the base, 3.5–5 cm. long, 4 mm. thick.

TYPE LOCALITY: Greig, New York.
HABITAT: On decaying logs and sticks in woods.
DISTRIBUTION: New York, Ohio, and Missouri.
ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. **24**: *pl. 4, f. 1–5*.

27. **Hebeloma sordidulum** (Peck) Sacc. Syll. Fung. **5**: 806. 1887.

Agaricus sordidulus Peck, Ann. Rep. N. Y. State Mus. **38**: 88. 1885.

Pileus thin, firm, convex, 2.5–4 cm. broad; surface viscid when moist, brownish-red or tawny-brown, paler on the margin; context white, with a radish-like odor; lamellae broad, crowded, rounded behind, slightly adnexed, pallid, becoming brownish-ochraceous; spores subellipsoid, 12–15 × 6–7 μ; stipe short, equal, stuffed or hollow, slightly fibrillose, pruinose at the apex, white, about 2.5 cm. long, 3–4 mm. thick.

TYPE LOCALITY: Karner, New York.
HABITAT: In sandy soil in open bushy places.
DISTRIBUTION: Known only from the type locality.

28. **Hebeloma discomorbidum** Peck, Bull. N. Y. State Mus. 139: 75. 1910.

Agaricus discomorbidus Peck, Bull. Buffalo Soc. Nat. Sci. **1**: 52. 1873.
Naucoria discomorbida Sacc. Syll. Fung. **5**: 842. 1887.

Pileus thin, broadly convex or nearly plane, 2.5–4 cm. broad; surface glabrous, slightly viscid, reddish-brown or chestnut-colored, becoming brown at the center with age or on drying; lamellae crowded, narrow, white or pallid, becoming brownish-ferruginous, white and crenulate on the edges; spores ellipsoid, uninucleate, 10 × 6 μ; stipe equal, stuffed or hollow, slightly mealy at the apex, white, 4–6 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Croghan, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: Northern New York and Massachusetts.

29. **Hebeloma luteum** Murrill, sp. nov.

Pileus large, thick, fleshy, convex to plane, solitary, 5–10 cm. broad; surface smooth, glabrous, viscid, luteous, margin ochraceous, entire, not striate; lamellae sinuate, ventricose, crowded, melleous to ferruginous; spores ellipsoid, smooth, subfulvous in mass, melleous under the microscope, 7–8.5 × 4–5 μ; stipe equal or tapering upward, smooth, dry, glabrous, pearly-white, 5–7 cm. long, 7–15 mm. thick; veil fibrillose, slight, evanescent.

Type collected on the ground in woods at Stockbridge, Massachusetts, September 3, 4, 1911, *W. A. Murrill & W. Gilman Thompson* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Massachusetts.

30. **Hebeloma flavum** Clements, Bot. Surv. Neb. **4**: 22. 1896.

Inocybe flava Massee, Ann. Bot. **18**: 497. 1904.

Pileus fleshy, campanulate, 5–6 cm. broad; surface viscid, flavous, clothed with concentric, brown scales, margin incurved, appendiculate; lamellae subsinuate, subcrowded, drab; spores

ovoid, smooth, ochroleucous, 7–8 × 4 μ; cystidia none; stipe thick, short, curved, densely covered except at the base with concentric, floccose, tawny scales, yellow, solid, 3–5 cm. long, 1–2 cm. thick.

TYPE LOCALITY: Bellevue, Nebraska.
HABITAT: On the ground.
DISTRIBUTION: Known only from the type locality.

31. **Hebeloma Colvini** (Peck) Sacc. Syll. Fung. 5: 805. 1887.

Agaricus Colvini Peck, Ann. Rep. N. Y. State Mus. 28: 49. 1876.

Pileus fleshy, convex or nearly plane, sometimes gibbous or broadly umbonate, rarely centrally depressed, 5–7.5 cm. broad; surface glabrous, grayish or alutaceous with an ochraceous tint; lamellae crowded, broad, sinuate-adnexed, whitish, becoming brownish-ochraceous; spores subellipsoid, 10–12 × 5–6 μ; stipe equal, flexuous, silky-fibrillose, stuffed or hollow above, solid toward the base, whitish, 2.5–8 cm. long, 2–6 mm. thick.

TYPE LOCALITY: West Albany, New York.
HABITAT: In sandy soil in open places.
DISTRIBUTION: New York.

32. **Hebeloma neurophyllum** Atk. Ann. Myc. 7: 370. 1909.

Pileus gregarious, 5–6 cm. broad; surface slightly viscid when moist with a thin gelatinous layer containing floccose threads, ochraceous to tawny-ochraceous; lamellae not crowded, pale-cinnamon-rufous, between vinaceous-cinnamon and cinnamon-rufous, rather broadly sinuate-adnexed, interveined, costate, about 8 mm. broad; spores subfusoid, slightly inequilateral, 12–15 × 7–8 μ; stipe white, fibrous-striate, even or very slightly bulbous, mealy toward the apex, hollow, with loose fibers, 7–8 cm. long, 5–6 mm. thick.

TYPE LOCALITY: Coy Glen, Ithaca, New York.
HABITAT: On the ground in woods.
DISTRIBUTION: Known only from the type locality.

33. **Hebeloma commune** (Peck) Murrill

Cortinarius communis Peck, Ann. Rep. N. Y. State Cab. 23: 106. 1872.

Pileus fleshy, broadly convex or expanded, 5–7.5 cm. broad; surface whitish or gray tinged with red, the disk deeper colored; lamellae rather broad, not crowded, emarginate and spuriously decurrent-toothed, whitish, becoming ochraceous-cinnamon; spores ellipsoid, smooth, melleous under the microscope, 7 × 4–5 μ; stipe equal, solid or stuffed, not bulbous, white-mealy at the apex, fibrillose below, dingy-white, 5–10 cm. long, 6–10 mm. thick.

TYPE LOCALITY: Center, New York.
HABITAT: In woods and open places.
DISTRIBUTION: Massachusetts and New York.

34. **Hebeloma parvifructum** (Peck) Sacc. Syll. Fung. 5: 805. 1887.

Agaricus parvifructus Peck, Ann. Rep. N. Y. State Mus. 38: 88. 1885.

Pileus convex, becoming expanded, 5–7 cm. broad; surface slightly viscid, whitish, grayish-brown or pale-chestnut, often paler on the margin; lamellae moderately crowded, slightly sinuate, white, becoming dingy-ochraceous, at first hidden by the copious, white, webby filaments of the veil; spores subochraceous, 6–7 × 4–5 μ; stipe equal, often flexuous, solid, silky-fibrillose, pruinose and substriate at the apex, whitish above, ferruginous or brownish toward the base, 5–8 cm. long, 6–8 mm. thick.

TYPE LOCALITY: West Albany, New York.
HABITAT: On sandy soil in pine woods.
DISTRIBUTION: Known only from the type locality.

35. **Hebeloma crustuliniforme** (Bull.) Quél. Champ. Jura Vosg. 95. 1872.

Agaricus crustuliniformis Bull. Herb. Fr. *pl. 308*. 1786.
Agaricus fastibilis Pers. Syn. Fung. 327. 1801.
Hebeloma fastibile Quél. Champ. Jura Vosg. 96. 1872.

Pileus fleshy, convex, becoming plane, obtuse or with an obtuse umbo, 5–7 cm. broad; surface even, glabrous, slightly viscid when young, whitish-tan or brick-red; context having

an unpleasant taste and the odor of radishes; lamellae crowded, adnexed, narrow, thin, whitish, becoming clay-colored or brownish-ferruginous; spores ellipsoid, unequal, 10–12 × 5–7 μ; cystidia 24–30 × 6 μ; stipe equal, stuffed or hollow, subbulbous, whitish, whitish-squamulose above, 5–10 cm. long, 6–10 mm. thick.

TYPE LOCALITY: France.
HABITAT: On the ground in woods or open places.
DISTRIBUTION: Greenland to North Carolina and west to Wisconsin; also in Europe.
ILLUSTRATIONS: Bull. Herb. Fr. *pl. 308, 546;* Cooke, Brit. Fungi *pl. 507 (456), 414 (457);* Fries, Ic. Hymen. *pl. 111, f. 2;* Sv. Aetl. Svamp. *pl. 64;* Gill. Champ. Fr. *pl. 356 (306), 357 (307);* Lucand, Champ. Fr. *pl. 17;* Pat. Tab. Fung. 1: *f. 342;* Ricken, Blätterp. Deutschl. *pl. 32, f. 1, 2.*
EXSICCATI: Desmaz. Pl. Crypt. *2151;* Herpell, Präp. Hutpilze *25;* Sydow, Myc. Mar. *2716, 3324.*

36. **Hebeloma sinapizans** (Fries) Gill. Champ. Fr. 527. 1876.

Agaricus sinapizans Fries, Epicr. Myc. 180. 1838.

Pileus compact, convex to plane, subrepand, solitary, 7–13 cm. broad; surface glabrous, viscid, pallescent, the disk isabelline; lamellae deeply emarginate, nearly free, crowded, broad, dry, entire, argillaceous-cinnamon; spores ovoid, punctate, somewhat irregular, 12–14 × 7–8 μ; stipe stout, equal, fibrillose, striate, white, the apex white-squamose, 5–15 cm. long, 2.5 cm. thick.

TYPE LOCALITY: Europe.
HABITAT: On the ground in moist coniferous woods.
DISTRIBUTION: New York; Pacific coast; also in Europe.
ILLUSTRATION: Cooke, Brit. Fungi *pl. 413 (455).*

37. **Hebeloma aeruginosum** Murrill, sp. nov.

Pileus convex, not fully expanding, not umbonate, solitary, 3 cm. broad; surface smooth, glabrous, extremely viscid, aeruginous, margin involute, broadly overhanging, concolorous; lamellae adnate, with decurrent tooth, very broad, subtriangular, not crowded, white to pale-yellowish, entire and concolorous on the edges; spores ovoid, smooth, pale-yellow under the microscope, 8–9 × 6 μ; stipe equal, solid, fleshy, dry, glabrous at the apex, coarsely squamose below, caesious-caeruleous, 4 cm. long, 7 mm. thick.

Type collected among humus in a fir forest at Glen Brook, Oregon, November 7, 1911, *W. A. Murrill 772* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

38. **Hebeloma sericipes** Earle, Bull. N. Y. Bot. Gard. 2: 342. 1902.

Pileus broadly convex to plane or subdepressed, obtuse, solitary, 4–6 cm. broad; surface glabrous on the disk, pale-olive-brown, dry, margin silky-fibrillose, entire; context white, unchanging, the taste mild, pleasant, the odor like chestnut flowers; lamellae sinuate, crowded, subnarrow, nearly plane, white to ochraceous-brown, the edges white, erose; spores ellipsoid or subovoid, varying in size, smooth, often with a large central vacuole, 7–10 × 4–7 μ; stipe equal, subglabrate at the base, the upper half conspicuously silky-fibrillose, white, solid, crisp, 4–6 cm. long, 7–9 mm. thick; veil universal, white, arachnoid.

TYPE LOCALITY: Stanford University, California.
HABITAT: Among oak leaves.
DISTRIBUTION: Known only from the type locality.

39. **Hebeloma lateritium** Murrill, sp. nov.

Pileus convex, becoming nearly plane with age, umbonate, gregarious, 5 cm. broad; surface distinctly viscid, smooth, glabrous, latericious, margin entire, not striate, avellaneous to cream-colored as the moisture escapes; lamellae sinuate, rather crowded, ventricose, pallid to clay-colored, conspicuously whitish-pubescent on the edges; spores ellipsoid, smooth, pale-yellowish under the microscope, 7–8 × 5 μ; stipe enlarged below, white, conspicuously fibrillose, fleshy, 6 cm. long, 7–10 mm. thick.

Type collected in sandy soil at the edge of a virgin forest at Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 295* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Vicinity of Seattle, Washington.

40. **Hebeloma dryophilum** Murrill, sp. nov.

Pileus rather thin, convex to expanded, somewhat umbonate or gibbous, solitary, 2–2.5 cm. broad; surface viscid, glabrous, smooth, cream-colored, darker on the disk, margin entire, concolorous; context white, without characteristic odor or taste; lamellae sinuate, rather crowded, broad, dark-cream-colored to subfulvous; spores ellipsoid, smooth, melleous under the microscope, 8–9 × 5–6 μ; stipe slightly enlarged at the base, fleshy, white, smooth, finely fibrillose below, 4–5.5 cm. long, 4–6 mm. thick.

Type collected among dead oak leaves at Stanford University, California, December 14, 1901, *C. F. Baker 140* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

41. **Hebeloma Harperi** Murrill, sp. nov.

Pileus convex to plane or slightly depressed, not umbonate, rather thin, gregarious, 4–5 cm. broad; surface glabrous, viscid, smooth or somewhat cracked, isabelline to reddish-brown with a silvery sheen, margin entire, concolorous, not striate; lamellae sinuate, crowded, rather narrow, clay-colored to subfulvous, entire and concolorous on the edges; spores ovoid, smooth, pale-yellowish under the microscope, dark-clay-colored in mass, 9–10 × 5–6 μ; stipe equal, silvery-white, slightly squamulose, 3–4 cm. long, 5–10 mm. thick.

Type collected in rich black soil on a lawn at Berkeley, California, February 20, 1911, *R. A. Harper 55* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Known only from the type locality.

42. **Hebeloma Bakeri** Earle, Bull. N. Y. Bot. Gard. 2: 342. 1902.

Pileus expanded, solitary, 5–7 cm. broad; surface distinctly viscid, glabrous, cream-colored, darker on the disk, margin entire; context white or cream-colored, unchanging, the taste and odor mild; lamellae deeply sinuate, heterophyllous, crowded, subventricose, pale-ochraceous-brown, the edges white and suberoded; spores ellipsoid-ovoid, 10–12 × 6–7 μ, usually with a large central vacuole; stipe long, equal, subglabrous at the base, pruinose at the apex, concolorous, solid, about 8 cm. long and 7 mm. thick.

TYPE LOCALITY: Stanford University, California.
HABITAT: On the ground in woods or groves.
DISTRIBUTION: Pacific coast.

43. **Hebeloma cremeum** Murrill, sp. nov.

Pileus convex to expanded, slightly gibbous, solitary, 5–7 cm. broad; surface viscid when young but soon becoming dry, perfectly smooth and glabrous, resembling dressed kid, uniformly cream-colored, margin entire, concolorous; context pure-white, without characteristic taste or odor; lamellae broadly sinuate, crowded, ventricose, pale-chocolate-brown at maturity, entire and concolorous on the edges; spores ellipsoid, smooth, brown in mass, rather dark for the genus, pale-ferruginous under the microscope, 12–13 × 6–7 μ; stipe subequal, fleshy, longitudinally striate, glabrous, dull-cream-colored, white at the apex, 8–9 cm. long, 7–12 mm. thick; veil membranous, slight, remaining attached in fragments to the margin.

Type collected in old pastures near Palo Alto, California, March 11, 1902, *C. F. Baker 379* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Southern California.

44. **Hebeloma californicum** Murrill, sp. nov.

Pileus thick, fleshy, irregular, convex to subexpanded, broadly umbonate, gregarious, 7–9 cm. broad; surface glabrous, grayish-white to cream-colored, smooth on the disk, striate and becoming cracked toward the margin, which is entire to undulate or lobed, concolorous, ornamented with the remains of a slight arachnoid veil; context rather thin, white; lamellae sinuate, very broad, subcrowded, white, becoming yellowish and finally yellowish-brown; spores ellipsoid, smooth, pale-ferruginous, 10–12 × 6 μ; stipe equal or tapering upward, shining-white or grayish, solid, ornamented with coarse fibrils, often split or cracked, 5–10 cm. long, 1.5–3 cm. thick.

Type collected in clay soil near oak trees on Jasper Ridge, Stanford University, California, March 26, 1916, *James McMurphy 218* (herb. N. Y. Bot. Gard.).

DISTRIBUTION: Southern California.

45. **Hebeloma farinaceum** Murrill, sp. nov.

Pileus large, thick, convex to nearly plane, not umbonate, 8–10 cm. broad; surface glabrous, viscid, cream-colored to light-buff, margin entire, incurved, pallid; context white, with farinaceous odor and taste; lamellae sinuate, rather narrow, plane or arcuate, crowded, yellowish to subfulvous, entire and concolorous on the edges; spores ovoid, finely punctate, melleous under the microscope, fulvous in mass, 10–12 × 7 μ; stipe enlarged below, thick, fleshy, solid, white within and without, smooth, decorated with the remains of the fibrillose, evanescent veil, 6–8 cm. long, 2–3 cm. thick.

Type collected under oaks at Jasper Ridge, near Stanford University, California, January 11, 1912, *James McMurphy 126* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Southern California.

46. **Hebeloma Broadwayi** Murrill, Mycologia **4**: 82. 1912.

Pileus fleshy, convex to expanded, 2–4 cm. broad; surface white, glabrous, subviscid, not striate; lamellae adnexed, crowded, rather narrow, white to ochraceous-fulvous, the edges white, crenulate; spores ochraceous-fulvous, ellipsoid, 12–14 × 7–8 μ; stipe cylindric, white, glabrous, hollow, 3–4 cm. long, 2–4 mm. thick.

TYPE LOCALITY: St. George's, Grenada.
HABITAT: Along roadsides in lowlands.
DISTRIBUTION: Known only from the type locality.

47. **Hebeloma cinchonense** Murrill, Mycologia **4**: 82. 1912.

Pileus convex to expanded, umbonate, gregarious, 3–6 cm. broad, 1–2 cm. thick; surface pale-isabelline, rarely milky-white with a stramineous tinge, viscid, smooth, margin white, thin, straight, slightly cottony; context white, without characteristic taste; lamellae white, sinuate-adnexed, ventricose, broad; spores pip-shaped, smooth, with a single large, clear nucleus, pale-melleous under the microscope, 8 × 4 μ; stipe fleshy with a thin rind, enlarged below, abruptly bulbous at the base, glabrous, white or pale-yellowish, 3–6 cm. long, 7–10 mm. thick; veil slight, fibrillose, evanescent.

TYPE LOCALITY: Cinchona, Jamaica.
HABITAT: On the ground.
DISTRIBUTION: Cinchona, Jamaica.

48. **Hebeloma subtestaceum** Murrill, sp. nov.

Pileus small, broadly conic, not fully expanding, umbonate, solitary, 8 mm. broad, 5 mm. high; surface smooth, viscid, pale-testaceous on the umbo, the color somewhat more dilute over the rest of the surface, margin fibrillose from the remains of the evanescent veil, incurved, concolorous; lamellae adnate, broad, rather distant, white to subfulvous, entire and concolorous on the edges; spores ellipsoid, smooth, ochraceous, 5–6 × 3.5 μ; cystidia inverted-bottle-shaped, tapering to a blunt apex, hyaline, numerous, 50 × 10 μ; stipe larger below, stramineous, decorated with loose tufts of testaceous fibrils from the remains of the fibrillose, evanescent, testaceous veil, 3 cm. long, 2 mm. thick above, 4 mm. below.

Type collected in rich soil in woods at Morce's Gap, near Cinchona, Jamaica, December 29, 30, January 2, 1908–9, *W. A. & Edna L. Murrill 710* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Known only from the type locality.

49. **Hebeloma subincarnatum** Murrill, Mycologia **4**: 83. 1912.

Pileus conic to plane, gregarious, 2–2.5 cm. broad, 7 mm. thick; surface smooth, glabrous, incarnate-isabelline, margin straight; lamellae adnexed, nearly free, cremeous when young, soon becoming luteous, broad, ventricose; spores subellipsoid, one-sided, smooth, with one or two nuclei, very pale yellowish, 8 × 4 μ; stipe crooked, cylindric, equal, smooth, ochraceous, fibrillose when young, especially at the top, 3 cm. long, 2.5 cm. thick.

TYPE LOCALITY: Monkey Hill to Sir John Peak, Jamaica.
HABITAT: Among moss growing on clay soil.
DISTRIBUTION: Known only from the type locality.

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